CLASS 222, DISPENSING

SECTION I - CLASS DEFINITION

This is the generic class for processes and apparatus for dispensing material, and takes all such subject matter that must be classified on such basis and not provided for in other main classes.

This class is not limited as to the character of the materials dispensed which may be in any physical state, i.e., it may be in a gas, vapor, liquid, viscous, paste-like or solid state and if in a self sustaining state may have any form or shape.

SECTION II - LINES WITH OTHER CLASSES AND WITHIN THIS CLASS

Dispensers are found in all classes dealing with the manufacture, treatment or handling of fluent materials, and particularly in classes having feeding or material handling subclasses. In general, the assignment of patents to the manufacturing and material treating classes has been on the basis of the non-dispensing operation, when the means or steps for performing the nondispensing operation are claimed. When the means or steps for performing the nondispensing operation are not claimed, assignment has been to the class taking the disclosed operation when material feeding subclasses occur in such art class and are designated and defined to receive such patents. Classes not having special subclasses of this type will not take devices falling in the scope of Class 222, when not claimed in combination with, or especially adapted for the machines or work of the art class, unless such class has a large body of art on dispensing, per se.

Patents having claims to a dispenser classifiable in this class, and also claims to a method of, or apparatus for, making such dispenser, are classified in this class, in the subclass appropriate to the dispenser claimed and cross-referenced to the appropriate manufacturing class.

GAS OR VAPOR DISPENSERS:

Dispensing of material in a gas or vapor state is provided for in subclasses 3+. These subclasses were formed on the basis of apparatus disclosed solely for dispensing a gas or vapor as the proximate purpose of the apparatus and have, in subclass 4, the combination of such dispensing means with means to additionally dispense materials other than gases or vapors.

Many devices in this class use gas, vapor, or liquid materials to contact other materials to cause dispensing of such other materials, or to operate motors or followers to cause dispensing of other materials, and some devices in this class utilize gas or vapor to agitate another material while the latter is being dispensed. Such combinations are not in subclasses 3+, but are in other following subclasses appropriate to the invention claimed. Since most of these devices involve the movement of gases or vapors from one place to another in the organization, significant gas dispensing apparatus is often disclosed and claimed as a part of the liquid or solid dispensing combination. Where the combination is claimed the gas dispensing subcombination is cross-referenced to subclasses 3+. It is classified as an original in subclasses 3+ when the gas or vapor dispensing subcombination only is claimed.

Most dispensers have vents for the chambers from which materials are dispensed, either to permit escape of gas or vapor as the chamber fills or to admit the same as the chamber empties. Vents were not classified in this class as dispensers.

For the various combinations within the class having a vent, or which utilize a gas, vapor, or liquid in various combinations as above set forth, see the notes to subclass 3.

For gas or vapor dispensers, per se, and for various combinations having such subject matter as a part thereof provided for in other classes see the Search Class notes in References to Other Classes, below, referencing this section.

ARTICLE DISPENSING:

Article dispensers are classified in Class 221, Article Dispensing and the definitions and Notes to that class should be consulted for the statements of the lines of that class with this class and with other related article dispensing and feeding classes, including strip feeding.

Dispensers capable of use with either articles or fluent material of granular, plastic or liquid nature, and claimed generically are classified in Class 222, that class being generic to the concept of the two classes (221 and 222).

VOLUME OR RATE OF FLOW METERS, RECORDERS, REGISTERS

This class has volume or rate of flow meters combined

with means for predetermining the total quantity dispensed in subclasses 14+; volume or rate of flow meters combined with signals, indicators, registers or recorders specialized for use with repeated dispensing operations, as registers with zero-setting or price and volume indicating combinations in subclasses 23+; volume or rate of flow meters combined with structure (in addition to that necessary for an operative volume or rate of flow meter) limited to dispensing in subclasses 52-73.

The dispensing features, in addition to meter structure, which, in general, determine classification in Class 222, are (1) meters having predetermined or preset cut-offs, (2) meters of the expansible chamber type having ingress or egress valves which are manually thrown, (3) meters having manual flow termination, (4) meters combined with storage tank features where the stored material is dispensed through the meter, (5) meters with nozzles, spouts, or equivalent dispensing outlets, and (6) meters combined with a pump significantly claimed.

For related subject matter, see References to Other Classes below, that reference this section.

DRIP LEAKAGE OR WASTE CATCHERS

Devices auxiliary to dispensing organizations for catching drip or waste material are in this class, including receivers or supports for receivers to be placed to collect material overflowing or not received by the intended receiver and also other material escaping from the desired discharge path.

For such devices, see subclasses 108+, and for related art see References to Other Classes, referencing this section.

COMBINATIONS OF DISPENSER AND INDEPENDENT RECEIVER

Dispensers under the class definition claimed in combination with either (1) a container or other receiver which is independent of the dispenser organization, i.e., such receiver not being a part of the means necessary to the dispensing operation, or (2) means which perform their function only in connection with such independent receiver.

The combination defined above is common to all apparatus for performing any character of operation on material, from those combinations in which the independent receiver is a mere receptacle to which the dispenser delivers material for filling purposes, to those combinations in which the receiver is a complicated manufacturing or treating apparatus and the dispenser is a feeding device to deliver material to such manufacturing or treating apparatus for operation thereon. Therefore, the great bulk of the patents granted on such combinations will be found in other classes classified on the basis of particular adaptation to deliver to receivers of particular kinds, or on the basis of the particular receiver (including manufacturing or treating apparatus) claimed.

Where the receiver is defined in such broad terms as to fail as a basis of classification (i.e., in broad terms, cover receivers of two or more types separately classified), it is classified in this class, or other classification appropriate to the dispenser claimed.

Since the above subject matter occurs primarily in other classes, classification is in this class only when no other class provides for such subject matter. For notes on gas dispensing, see GAS OR VAPOR DISPENSERS above. The Search Class notes below that reference this section do not attempt to be exhaustive, specifying only those classes that are known to have apparatus closely resembling the apparatus in this class.

Relative to the cleaning of dispensers: Classes 15 and 134 take cleaning devices of the types provided for in those classes, per se, or in combination with dispensers or fluid flow systems which are so broadly recited as to appear to constitute parts of the cleaning means rather than the articles to be cleaned. Specific dispenser or fluent material handling structures, including such details as to give a basis for classification in Class 222 or in Class 137, combined with means for cleaning such dispensing or handling structures are classified in Class 222, in subclasses 148+, or in Class 137, in subclasses 237+. (Combinations of Dispenser and Independent Receiver)

Some liquid cleaning subcombinations involve no more than dispensing a cleaning fluid to the article to be cleaned (as a receiver). Class 137 and Class 222 take such devices as fluent material handling or dispensing inventions, but where a cleaning feature (as dissolving of a cleansing material, surging of the cleaning fluid, etc.) is present, classification is in Class 134, in appropriate subclass subclasses thereof. Also see the Search Class note below to Class 15 referencing this section.

PUMPS

This class has pumps in various combinations with dispensing features. Dispensing features combined with pumps are:

A. Selectively preset volume responsive cutoff means to control the quantity discharged (e.g., those which can be preset to operate through a desired number of cycles), see subclasses 14+.

B. Totalizing or other registering means, or recording means, the combination being specialized for repeated operations (as those provided with zero-setting means or combined price and volume devices) see subclasses 23+.

C. Position or extent of motion indicators, when other dispensing features are claimed (e.g., as set forth in (d), (e), and (f) see subclasses 41+.

D. Measuring means in addition to the pump, see subclasses 23+ and 71+.

E. The combination between a pump and a significantly claimed container which forms the source of supply for the pump. A supply container is considered to be significantly claimed when any one or any combination of the following are recited: (1) the structural features of the container; (2) the mounting of the pump on a container closure, (3) particular relationships between the pump or its controls and the container, see appropriate subclasses such as 252+ and 372+.

F. The provision of means in addition to pump structure and its operator to prevent the start of intake before the pump has reached the end of its discharge operation, see for example, subclass 34.

G. Discharge outlet (e.g., nozzle) features significantly claimed, see for example, subclasses 74, 320, 322, 330, 378, and 379.

For the most part, the notes on dispensers and combinations of dispensers with other things, in which a pump is part of the dispenser organization, are placed in Lines With Other Classes and Within This Class, in this Class Definiton.

For pump structure, and for means to operate and control the same, including means to vary the pump capacity both with or without an indicator see the Search Class notes below in References to Other Classes. In particular, see Classes 137, 366, 406, 417, and 418.

DISCHARGE ASSISTANTS: (E.G., IMPELLERS, PUMPS, CONVEYORS, MOVABLE TRAP CHAMBERS, ETC.)

Devices combined with containers, or specially adapted for use with containers, and comprising means acting in addition to, or against, gravity for either removing material from a container, or which move, or tend to cause material to move, to or through a container outlet, have been herein designated generically “discharge assistants.”

The discharge assistants as above comprise any means in either fluid or solid form, which moves or tends to urge material to move toward a discharge outlet or into or out of a trap chamber. Included are means to apply pressure fluids directly to the material to cause material motion, jarring, or vibrating means, pumps, pulsators, impellers, pushers, ejectors, vanes, rolls, screws, mechanical and fluid current conveyors of all kinds, followers (including followers moved only be atmospheric pressure), agitators functioning primarily to cause discharge, and devices for breaking material bridges or arches.

Movable trap chambers are devices which, when moved to one position, receive material from a supply and, when moved to another position, discharge the trapped material. These may act against or with gravity, sometimes offering no assistance to discharge except the physical separation of a portion of the material, and its confinement and control during downward movement, but they were found so closely related to nongravity discharge assistants as to cause it to be advisable to associate the two in the classification (e.g., many movable trap chambers were, in addition, mechanical conveyors).

The above character subject matter occur in numerous subclasses throughout the class, attention being particularly called to subclasses 92+ and 193 through 415, in which subclasses the discharge assistant constitutes the primary basis of classification.

Since, in most classes, dispensers and combinations thereof with other things are not separated on the basis of whether or not they have discharge assistants, notes on this type are not separately set out, and the notes to Lines With Other Classes and Within This Class, Pumps, should be consulted.

STATIONARY TRAPS:

Stationary material trapping devices auxiliary to a bulk supply are included in the class more particularly as follows: (1) containers having means for separating from the contained material a quantity less than the whole and maintaining the same in a position for access thereto by

some removing agency; these may be barometric in type, or a mere wall or well to reduce the area of material exposed in the main container (e.g., dispensing inkwells); (2) containers having receptacles or funnels for receiving or guiding the container contents, which are carried by, or form part of, the container and must be separated therefrom before use; (3) containers having detachable auxiliary chambers which receive part of the container contents while in place on the container, but which must be separated for discharge; (4) containers having auxiliary chambers which receive part of the container contents and discharge the same through tilting of the entire organization and which are provided with passages and baffles arranged to prevent additional material from entering the trap while the container is tilted; (5) containers having serial alternately opened valves so related as to perform a measuring function, the so-called predetermined-bulk stationary trap, and subcombinations disclosed as continuously connected to a source of supply.

These devices are related to the movable trap chambers and other discharge assistants treated inthe section "Discharge Assistants" above.

Attention is particularly called to subclasses 424.5 through 457, and other subclasses, specified in the notes thereto, for this type of subject matter.

PATTERN OR SIFTER FORM OUTLET AND WITH MATERIAL SEPARATOR:

This class includes the combination of a dispenser with means to sift, strain, or filter the material dispensed as an incident to the dispensing operation (see subclasses 189.01, 189.02+ and 189.06+), and also dispensers having a pattern or sifter form of outlet (see subclasses 480, 564 and 565, and the notes thereto). Relative to sifters, strainers, or filters, combined with a dispenser, this class has this combination when the separating device is incidental to the dispenser, while the appropriate separating class has the separating means with means to deliver material thereto or therefrom. Relative to pattern or sifter forms of outlet, this class has the same where there is no structure specialized to, or intent of, separating, the foraminous nature of the outlet being for the purpose of holding back the bulk of the material while permitting the escape of limited quantities, or assisting to distribute the material delivered.

For related art, see the section "Hand Manipulable Shakers" below, and the Search Class notes referencing that section.

HAND MANIPULABLE SHAKERS:

Hand manipulable shaker type dispensers are those which are adapted to dispense nonfree flowing granular material when it is kept in motion within the container, which is held in the hand and moved to and fro to shift the material. In these dispensers, the outlet is restricted to such an extent that bridging of the material occurs immediately after the material is initially brought into contact with the outlet, usually as a result of tilting the container as for gravity flow. Dispensing occurs only as a result of repeated contacts or impacts of the bulk of the material against the outlet area, as in the use of the ordinary condiment holder or salt shaker. If a discharge assistant or agitator is present, it is inertia operated only, having no actuator connected thereto.

Special provision for this subject matter is made in this class under the title Hand Manipulable Shaker Type in the following instances; subclasses 142.1+, for those having plural sources of supply, e.g., combined salt and pepper shakers; 196.1+, for those having an inertia operated movable member which jars or has an impact effect, although it may also serve as a closure or discharge controller or as a discharge assistant; 457.5 for those having a generally U-shaped path through which material is shaken; and 480, for those having multiple diverse type outlet openings. Hand manipulable shakers having manually operated discharge assistants having been classified in the dispenser subclass appropriate to the type.

Where the outlet is of pattern form, distribution of the dispensed material is also effected. For pattern or sifter type dispensing outlets, see the section on "Pattern Or Sifter Form Outlet And With Material Separator" above, and the search notes below referencing that section.

For hand manipulable devices having material agitating or comminuting features see the References to Other Classes below, that reference this section.

DIPPING AND SAMPLING:

This class has dipping type dispensers and dispensers related to samplers, see subclasses 576+ and 356+ and the notes to other subclasses in Class 222 for such art. For related art in other classes, see the search notes in References to Other Classes, below, that reference this section.

SHAPING MATERIAL BY EXTRUSION:

Where the outlet of a dispenser has a particular shape, so that the operation of the dispenser causes a plastic material to be delivered having a desired shape, classification is in the class appropriate to the plastic shaping involved.

See the search notes in References to Other Classes, below, that reference this section.

FURNACE CHARGING AND DISCHARGING:

This class has dispensers, per se, for fuel and other materials which are intended for delivery to furnaces. Where features are claimed that specialize the apparatus to charging or discharging a furnace, classification is in some other class. See References to Other Classes, below, that references this section.

SANDING OR ABRADING

See the search notes in References to Other Classes, below, that reference this section.

See also Pattern or Sifter Form Outlet and With Material Separator and Throwers, Sprayers, Scatterers, and Dusters, and the Search Class references thereto.

THROWERS, SPRAYERS, SCATTERERS, AND DUSTERS.

See the search notes in References to Other Classes, below, that reference this section.

See also Pattern or Sifter Form Outlet and With Material Separator and Sanding or Abrading, and the Search Class notes thereto.

VEHICLE LOADING AND UNLOADING:

This class has some vehicular dispensers, see subclasses 176+, but has no other characters of vehicle loading and unloading.

PUNCTURING INJECTORS AND OTHER NOZZLES, SPOUTS, AND POURING DEVICES:

The class includes container structures in combination with one or more dispensing outlet structures; with or without other openings (as filling or vent openings), or dispensing outlet structures, per se, and such structures formed to cut or punch other things, or combined with a cutter or punch for forming openings in the receiver of the material dispensed.

Dispensing outlet structures comprise the following features or any combination therebetween: (1) material guide means (as nozzles, spouts, pouring lips, et cetera), i.e., any means specialized to guiding the material being discharged and located either on the interior or exterior of the container or both. Such structure must be in addition to mere container openings with or without surrounding flanges or necks to receive closures. Such guide means may be stationary relative to the container or movably related thereto; (2) nonguiding type outlets with flow controllers (e.g., valves).

Additional openings for nondispensing purposes, such as filling openings and vents, may be included, and also closures (as distinguished from flow controllers) for any opening, means for connecting the various elements together or means for mounting or operating movable parts. Cutter or punch combinations are in subclasses 80+.

Patents claiming only the container in combination with the features above outlined (excepting cutter or punch features) are in this class starting with subclass 476 and including all following subclasses. Such features in combination with other features are in the preceding subclasses, for example, the combination with a casing or support for the dispenser is in subclasses 173+, with discharge assistant in subclasses 251+, with container handle or handgrip in subclasses 465+.

Containers in combination with such features are found in substantially all classes which involve handling of material in bulk, and in substantially all classes which involve container structure, classified on special bases and features in addition to the dispensing features. For such devices for purposes other than dispensing, and for such devices that are for dispensing, but are specialized to particular uses, see below, Restricters, Pipe and Tubular Conduit Structures, and Valves and Valve Actuation, for restricters and valves.

See the search notes in References to Other Classes, below, that reference this section.

CONTAINER OR RECEPTACLE STRUCTURE

This class does not have receptacle or container structure unless combined with dispensing features. Collapsibility, per se, is considered to be a dispensing feature, relative to structures disclosed as dispensing containers. For receptacles, containers and tubular conduit structures, not involving dispensing features:

See the search notes in References to Other Classes, below, that reference this section.

CLOSURES

Mere closure structures for containers and other devices having openings, not claimed in combination with a nozzle, spout, pouring lip, discharge assistant, or other dispensing feature, and also closures for spouts where no features of spout structure are claimed other than those necessary for the mounting and operation of the closure, are not in Class 222, but in other appropriate classes.

See the search notes in References to Other Classes, below, that reference this section.

RESTRICTERS, PIPE AND TUBULAR CONDUIT STRUCTURES

This class has neither flow restrictors except those in the interior of dispenser supply containers, provided for in subclasses 547 and 564, nor pipe and tubular conduit structures, per se. For such subject matter:

See the search notes in References to Other Classes, below, that reference this section.

VALVES AND VALVE ACTUATION:

This class has both single and plural valves and their actuating means (1) when claimed in combination with a dispenser, (2) when arranged to control inlet from a bulk supply into a trap chamber and discharge of the trapped material from such chamber, and (3) when claimed in combination with receptacle structure so as to control and regulate discharge of the container contents.

For valves and valve actuating means not involving such combinations, see the search notes in References to Other Classes, below.

SECTION III - REFERENCES TO OTHER CLASSES

SEE OR SEARCH CLASS:

4, Baths, Closets, Sinks, and Spittoons, for such devices having means for dispensing water, disinfectants, and other materials thereto, and for dispensers specially designed for such purposes, flush tanks for closets being in subclasses 353+. (Combinations of Dispenser and Independent Receiver)

12, Boot and Shoe Making, for manufacturing apparatus with dispensing means, and dispensers specially designed for use in connection with boot and shoe manufacture, e.g., subclass 41.3, for pliabilizing soles, 79.5, waxing and polishing and 18.2 shoe filling.

15, Brushing, Scrubbing, and General Cleaning, for apparatus operating by brushing, beating, scraping, shaking, wiping, shotting, or use of a squeegee in combination with means to dispense cleaning or other materials to such operating devices. The dispenser subcombination for delivering materials to such instrumentalities so that such instrumentalities may operate thereon are in Class 222 or other appropriate dispenser classification. See Lines With Other Classes and Within This Class, above, "Combinations of Dispenser and Independent Receiver" for cleaning of dispensers. (Combinations of Dispenser and Independent Receiver)

15, Brushing, Scrubbing, and General Cleaning, subclasses 300.1+ for air blast and/or suction cleaning devices. (Gas or Vapor Dispensers)

15, Brushing, Scrubbing, and General Cleaning, subclasses 248.1+, for drip cups and shields. (Drip Leakage or Waste Catchers)

15, Brushing, Scrubbing, and General Cleaning, subclass 322 and 415+ for air blast and suction cleaner nozzles. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

19, Textiles: Fiber Preparation, subclasses 200+ having fiber feeding and cleaning.

19, Textiles: Fiber Preparation, subclass 9 for devices utilizing an air blast to assist in liberation of fibers from plants, and subclass 205 for pneumatic feeding of fibers. (Gas or Vapor Dispensers)

23, Chemistry: Analytical Processes, subclasses 293+ for physical processes; and subclasses 230+ for analytical and analytical-control processes. (Gas or Vapor Dispensers)

27, Undertaking, subclass 24.1 for embalming injectors. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices

30, Cutlery, subclass 125, for hand manipulable shakers forming the handle of a cutlery implement. (Hand Manipulable Shakers)

30, Cutlery, subclasses 324+, for spoons. (Dipping and Sampling)

30, Cutlery, subclasses 41+ for razors combined with means to dispense fluent material such as water or lather,and subclasses 483 for lubricating attachments

33, Geometrical Instruments, see appropriate subclasses for geometrical instruments with means for dispensing fluids operable in connection with the use of the instruments, e.g., subclasses 34+ for straight line scribers using ink.

33, Geometrical Instruments, subclass 126.4, for sounding type of distance measuring means combined with sampling devices. (Dipping and Sampling)

34, Drying and Gas or Vapor Contact With Solids, subclass 59 for combinations with a rotary scattering member. (Throwers, Sprayers, Scatterers, and Dusters)

34, Drying and Gas or Vapor Contact With Solids, for processes and apparatus for contacting solids with gases or vapors for drying or other purposes. (Gas or Vapor Dispensers)

34, Drying and Gas or Vapor Contact With Solids, subclass 85 for such apparatus combined with means to collect escaping material. (Drip Leakage or Waste Catchers)

34, Drying and Gas or Vapor Contact With Solids, for apparatus having features specially designed for the drying of solid material, or for contacting solid material with gases or vapors for purposes other than mere agitation, and such apparatus combined with feeding and/or discharging means, dispensers, per se, being in Class 222, or other appropriate dispenser classification.

38, Textiles: Ironing or Smoothing, subclasses 3+, 14+ and 77.1+ for moistening combinations using vapors. (Gas or Vapor Dispensers)

40, Card, Picture, or Sign Exhibiting, subclass 213 for skywriting using smoke or luminous material. (Gas or Vapor Dispensers)

43, Fishing, Trapping, and Vermin Destroying, subclasses 125+, for vermin destroying fumigators. (Gas or Vapor Dispensers)

47, Plant Husbandry, subclass 11 for sap spouts and gutters for gathering sap from pine and rubber trees, subclass 48.5 for irrigators or fertilizers of container or cartridge form which are buried in the earth, usually discharging their contents over a period of time, 51 and 52+ for spouts for conveying sap from other trees, and 57.5 for miscellaneous injection devices. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

48, Gas: Heating and Illuminating, particularly subclasses 174+, 180+ and 190+, for gas holding, mixing, and distributing means and methods. (Gas or Vapor Dispensers)

48, Gas: Heating and Illuminating, for apparatus for feeding materials to acetylene generators, other gas generators and other devices specialized to heating and illuminating gases. (Combinations of Dispenser and Independent Receiver)

48, Gas: Heating and Illuminating, subclasses 46+ for carbid feed devices for delivering measured charges. (Stationary Traps)

48, Gas: Heating and Illuminating, subclasses 41+ and 45, for dip type carbid feeders for acetylene generators. (Dipping and Sampling)

48, Gas: Heating and Illuminating, see subclasses 4+ and 38+ for acetylene generator water and carbide feeds, respectively.

56, Harvesters, subclass 32 for pneumatic cotton picker nozzles. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

68, Textiles: Fluid Treating Apparatus, subclass 201, for needle type liquid injectors. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

73, Measuring and Testing, subclasses 215+ and 861.61+ for pressure differential type meter nozzles and weirs, respectively. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

81, Tools, subclass 15.6 for cement injectors for resilient tire repair. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices

99, Foods and Beverages: Apparatus, subclasses 532+ hollow injecting needles for pickling foods. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

104, Railways, subclass 11 for tampers with pneumatic injector. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

111, Planting, appropriate subclass for forming openings in the earth, depositing material in the openings and usually covering over with earth, and including in subclasses 118+, the depositing of liquid or gases. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

122, Liquid Heaters and Vaporizers, subclass 405 for washout nozzles for cleaning boilers. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

52, Static Structures (e.g., Buildings), subclasses 11+ for building cover with an eave, or valley gutter, subclasses 302.1+ for building structure or component with a fluid handling feature open to the ambient, and subclass 553 for a subsurface drainage device related to a lapped multiplanar or strip covered surfacing. (Drip Leakage or Waste Catchers)

52, Static Structures (e.g., Buildings), subclasses 192+ for specific structure of a fluent material container with a single material port, e.g., outlet at a hopper bottom.

53, Package Making, subclasses 395 and 396+ for processes, and especially subclasses 147+ for apparatus to feed the contents to and from a machine to form a package.

55, Gas Separation, subclasses 490+ and those following for gas filters. (Pattern or Sifter Form Outlet and With Material Separator)

56, Harvesters, subclass 207 for harvesters combined with means to catch loosened (shelled out) grain that would otherwise be lost. (Drip Leakage or Waste Catchers)

62, Refrigeration, appropriate subclasses for processes and apparatus involving steps or means specialized to refrigeration processes and apparatus, solidified or liquefied gas product manufacturing and stored liquefied or solidified gas handling, particularly subclasses 45.1+ for processes and apparatus for the handling of liquefied gas involving more than that required for any gas or liquid under pressure, and subclasses 389+ for a withdrawable liquid cooler having specific cooling means. (Gas or Vapor Dispensers)

65, Glass Manufacturing, subclasses 324+ for molten glass dispensers, per se.

68, Textiles: Fluid Treating Apparatus, subclass 210 having loaders, unloaders and dumpers for such machines.

68, Textiles: Fluid Treating Apparatus, subclasses 5+ for apparatus for applying a gas, steam or mist to textiles to treat the same, subclass 20 for combinations with a drier in which a gas contacts the textiles for drying purposes and subclasses 183 and 207, for apparatus in which a gas or vapor is supplied to the treating liquid. (Gas or Vapor Dispensers)

68, Textiles: Fluid Treating Apparatus, subclass 208 for drains and overflows for such apparatus. (Drip Leakage or Waste Catchers)

72, Metal Deforming, subclasses 253.1+ for die-expressing metal. (Shaping Material by Extrusion)

73, Measuring and Testing, subclass 426 for the line between this class (222) and the measuring vessels provided for in Class 73.

73, Measuring and Testing, subclasses 863+ for samplers. (Dipping and Sampling)

73, Measuring and Testing, subclasses 861+ for volume or rate of flow meters, per se. The mere naming of a pump supply does not exclude such meters from Class 73; such meters are in the class both when the registering means are and are not claimed. Class 222 has dispensing devices which determine a volume dispensed which do not repeat the operation as a result of, or under the control of, the completion of the preceding operation, see particularly Class 222, subclasses 282+ for those with volume varying means, 344+ for movable or conveyor type trap chambers, and 425+ for stationary trap chambers with cut-offs, these various types combined with a recorder, register, indicator, signal, or exhibitor being in subclasses 23+. (Volume or Rate of Flow Meters, Recorders, Registers)

73, Measuring and Testing, subclass 426 for measuring vessels. (Stationary Traps)

81, Tools, for some combinations with dispensing means, e.g., subclass 2 and 15.5+, dispensers, per se, being in subclass 15.6 when specially designed for injecting cement into tires.

83, Cutting, subclass 169, for means to lubricate tool or work.

99, Foods and Beverages: Apparatus, Lines With Other Classes and Within This Class, Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices, appropriate subclasses having apparatus specialized to treating food and beverages materials which include dispensing features, dispensers, per se, being in Class 22 or other appropriate dispenser classification. subclass 275, Class 99, as the residual beverage making apparatus subclass, has apparatus for carbonating a liquid by specific contact means, combined with means for adding flavoring material to form a beverage.

96, Gas Separation: Apparatus, appropriate subclasses for gas separators having special flow connections, valves, pumps, separated gas outflow control means and residue flow control. (Gas or Vapor Dispensers)

100, Presses, subclasses 215+ for presses not elsewhere classified having means for feeding material to the press, and see the Notes thereto for other press structures having means for feeding material thereto, and see subclasses

104+ for presses provided with drain means for expressed liquids.

101, Printing, subclasses 335+ having inkers.

102, Ammunition and Explosives, appropriate subclasses having oil, gas, smoke, incendiary material containing devices.

102, Ammunition and Explosives, subclass 334 and 367+ for such devices for emitting gases or smoke for tracing or other purposes. (Gas or Vapor Dispensers)

104, Railways, subclass 133, for drip pans, nets, et cetera, for catching liquid, dirt, or articles that might fall from an elevated railway. (Drip Leakage or Waste Catchers)

109, Safes, Bank Protection, or a Related Device, subclass 28, for drains or sumps associated with containers to remove explosives to prevent their successful use. (Drip Leakage or Waste Catchers)

109, Safes, Bank Protection, or a Related Device, subclass 20 and 29+, for combinations involving releasing, generating, or distributing gases or vapors. (Gas or Vapor Dispensers)

109, Safes, Bank Protection, or a Related Device, subclass 20 and 29 having fluent material dispensing combinations, and 46 having movable safes or compartments with dumping mechanism.

110, Furnaces, appropriate subclasses, for combinations with means for feeding gases or vapors to the fuel or for cooling purposes. (Gas or Vapor Dispensers)

110, Furnaces, subclasses 104+ for fuel feeders which blow the fuel into a furnace. (Throwers, Sprayers, Scatterers, and Dusters)

111, Planting, subclasses 118+, for process and apparatus for impregnating the ground with a gas, vapor or liquid. (Gas or Vapor Dispensers)

114, Ships, subclass 182, for scuppers i.e., arrangements of passages or holes so that water may drain from decks. (Drip Leakage or Waste Catchers)

114, Ships, subclass 86, 224 and 232+ for caulking and seaming and oil distributing apparatus.

119, Animal Husbandry, subclass 10, 18, 51.01+, and 72+ having feeding and watering devices.

122, Liquid Heaters and Vaporizers, subclasses 451+ having feeders.

118, Coating Apparatus, subclasses 504+ for devices used by painters to protect one of two adjacent surfaces while the other is being coated. (Drip Leakage or Waste Catchers)

118, Coating Apparatus, specialized to spreading coating materials over surfaces to be coated. The dispenser subcombination (i.e., the means for merely discharging coating materials from a bulk supply) is in Class 222, or other appropriate dispenser classification. (Combinations of Dispenser and Independent Receiver)

118, Coating Apparatus, subclasses 300+ for coating apparatus in which the coating material is projected, flung, sprayed or dripped on the work. (Throwers, Sprayers, Scatterers, and Dusters)

119, Animal Husbandry, subclass 159 for antivermin dust scatterers. (Throwers, Sprayers, Scatterers, and Dusters)

119, Animal Husbandry, subclasses 56.1+ for feeding troughs with charge delivering means. (Stationary Traps)

122, Liquid Heaters and Vaporizers, subclass 395, for cleaning such apparatus by sand blast. (Sanding or Abrading)

124, Mechanical Guns and Projectors, particularly subclasses 4+ for centrifugal guns. (Throwers, Sprayers, Scatterers, and Dusters)

126, Stoves and Furnaces, subclass 51, for devices for oil drip or overflow catching for oil burning cook stoves. (Drip Leakage or Waste Catchers)

128, Surgery, subclasses 203.12+, for inhalers and subclasses 204.18+ having gas holder combinations. (Gas or Vapor Dispensers)

131, Tobacco, subclasses 38+, 108+, and 180+, having tobacco feeders.

132, Toilet, subclasses 112+ for liquid applying combs, and subclass 74.5 for manicuring devices with fluent material feed.

134, Cleaning and Liquid Contact With Solids, particularly subclass 43, 62, 84+, and 135 for drainers in combination with cleaning or liquid contact apparatus. (Drip Leakage or Waste Catchers)

134, Cleaning and Liquid Contact With Solids. See Lines With Other Classes, above, "Combinations of Dispenser and Independent Receiver" for liquid cleaning subcombinations.

137, Fluid Handling, this class is the generic class for the handling of fluids, and has miscellaneous distributing systems, valve actuation, fluid handling tanks, etc. Since many of the systems of the two classes are analogous or identical and most of the subcombinations are freely interchangeable, the search fields in the two classes must always be studied and compared.

137, Fluid Handling, which is the generic class for gas distribution; see particularly subclasses 154+ for diverse fluid containing pressure systems, especially subclasses 206+ for gas pressure storage over or displacement of liquid; 223+ for inflatable article, e.g., tire, filling chuck and/or stem; subclasses 505+ for fluid pressure regulators, per se, this class (222) taking combinations of such regulators with significantly included supply containers; and subclasses 624.11+, for a fluid distribution system including a programmer or timer. (Gas or Vapor Dispensers)

137, Fluid Handling, subclasses 312+ for drip and leakage collecting in fluid handling systems. (Drip Leakage or Waste Catchers)

137, Fluid Handling, subclasses 119+ and 872+ for branched downspouts with flow deflectors; subclass 318 for devices for tapping a pipe or tank under pressure by forming an aperture therein under conditions which prevent loss of fluid; subclasses 614.02+ for separable flow path sections with a coupling operated valve in each wherein one section may be of the barrel bushing type and the other section a spout; subclasses 615+ for distribution systems having swinging or articulated flow conduits; and subclass 801 for faucets and spouts, per se. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

137, Fluid Handling, subclass 801 for restrictors comprised in outlets, nozzles or spouts. (Restricters, Pipe and Tubular Conduit Structures)

137, Fluid Handling, subclass 145 and 147+ for siphon starting pumps, and 565.01+ for distribution systems including a pump. (Pumps)

137, Fluid Handling, subclasses 156+ for gas pressure discharge of feed traps to boilers; subclasses 171+ for fluid separating traps; subclasses 571+ for plural tanks or compartments, including traps, connected for serial flow; subclass 596 for stop and waste systems; subclasses 602+ for multiple inlet with single outlet systems; subclasses 861+ for systems having flow control means for plural passages; subclasses 613+ for single flow path devices with serial valves which may comprise alternately seated inlet and outlet valves subclasses 625+ for multiway valve units; and subclass 627.5 for sequentially closing and opening alternately seating flow controllers. (Stationary Traps)

137, Fluid Handling, subclasses 140 and 544+ for fluid handling systems having means for separating solid material from the fluid, as strainers, filters, separators and sediment traps. (Pattern or Sifter Form Outlet and With Material Separator)

137, Fluid Handling, subclasses 249+ and 309+ for reversing valves for regenerative furnaces. (Furnace Charging and Discharging)

138, Pipes and Tubular Conduits, and see the notes thereto. (Restricters, Pipe and Tubular Conduit Structures)

138, Pipes and Tubular Conduits, appropriate subclasses for tubular conduit structures not disclosed as dispensing containers and not including dispensing features. For a statement of the line between Class 138 and Class 222 see the reference to Class 222 in the SEARCH CLASS note to the class definition of Class 138. (Container or Receptacle Structure)

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 86+ for combinations of a filling device and means for catching material overflowing from the receptacle filled, and subclasses 106 and 364 for means supporting inverted supply receptacles upon receivers for draining. (Drip Leakage or Waste Catchers)

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 4+ for filling with gas and/or evacuating, including tire inflation with gas, and subclass 38 for filling tires with nongaseous materials. (Gas or Vapor Dispensers)

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, and see the Notes thereto, for a statement of the line with Class 222. (Combinations of Dispenser and Independent Receiver)

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, appropriate subclasses.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 110+ for filling by immersion. (Dipping and Sampling)

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 331+ having funnels and subclass 65.

152, Resilient Tires and Wheels, subclasses 415+ for resilient tire inflating devices combined with vehicle or wheel structure for inflating means more or less permanently associated with an individual tire or for means for inflat-

ing one tire from another. (Gas or Vapor Dispensers)

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for processes and apparatus for laminating in general and see especially subclasses 145+ for filling hollow laminae with fluent material. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

159, Concentrating Evaporators, subclass 30, for samplers for closed evaporating chambers.

159, Concentrating Evaporators, subclasses 43.1+ having fluid feed or discharge devices.

160, Flexible or Portable Closure, Partition, or Panel, for flexible closures and see the places set forth in the notes thereto. (Closures)

162, Paper Making and Fiber Liberation, subclasses 407+ for mold charging means employed in the making of a fibrous article from a liquid suspension of fibers.

164, Metal Founding, subclass 174 for die expressing apparatus for sand molds or cores and subclasses 418+ for continuous metal casting apparatus. (Shaping Material by Extrusion)

164, Metal Founding, subclasses 159+ for sand mold forming apparatus and particularly subclasses 192 to 202 for means for delivering sand to the molding device. (Sanding or Abrading)

164, Metal Founding, subclasses 192+, 198+ and 200+ for apparatus for charging mold forming materials into a flask, subclasses 303+ for apparatus for injecting metal into a mold, subclasses 335+ for metal casting apparatus including a ladle or crucible type metal receptacle and subclasses 437+ for continuous casting apparatus including means to dispense molten metal into a mold.

166, Wells, subclass 162 and the subclasses there noted for well receptacles for receiving or depositing material in the well. (Dipping and Sampling)

169, Fire Extinguishers, subclasses 11+, for those using a gaseous fire extinguishing agent. (Gas or Vapor Dispensers)

169, Fire Extinguishers, for apparatus and processes for extinguishing fires. (Combinations of Dispenser and Independent Receiver)

169, Fire Extinguishers, this class having fluid systems, automatic valves, tanks, portable receptacles, et cetera, having dispensing features specially adapted for the purposes of the class.

177, Weighing Scales, subclasses 59 and 60+ for weigh chamber responsive material control. See subclass 77 of Class 222 and the note thereto. (Combinations of Dispenser and Independent Receiver)

174, Electricity: Conductors and Insulators, subclasses 8+ having fluid feeding combinations.

178, Telegraphy, subclass 96 for inking devices for code receivers.

184, Lubrication, sections 7, 11; see particularly subclasses 14+ for dispensing devices specially adapted for structural association with a bearing that receives the lubricant.

184, Lubrication, subclass 106 for drip pans placed beneath a bearing to catch unused oil and either hold it or return it to a reservoir. (Drip Leakage or Waste Catchers)

184, Lubrication, subclass 83 for gravity feed lubricators with measuring valves. (Stationary Traps)

186, Merchandising.

192, Clutches and Power-Stop Control, subclass 125 for stop mechanism controlled by material fed.

193, Conveyors, Chutes, Skids, Guides, and Ways, Lines With Other Classes and Within This Class, Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices.

194, Check-Actuated Control Mechanisms, see appropriate subclasses for check actuator.

196, Mineral Oils: Apparatus, subclass 135 for feeders for vaporizing apparatus.

193, Conveyors, Chutes, Skids, Guides, and Ways, subclasses 2+, for chutes. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

198, Conveyors: Power-Driven, subclasses 638+ for a thrower type conveyor. (Throwers, Sprayers, Scatterers, and Dusters)

201, Distillation: Processes, Thermolytic, subclass 39, for a thermolytic distillation process including quenching the char with an inert gas. (Gas or Vapor Dispensers)

201, Distillation: Processes, Thermolytic, subclass 39 for a process including quenching the char with an inert gas.

202, Distillation: Apparatus, subclass 95, 227+ and 253 for quenchers.

202, Distillation: Apparatus, subclass 227, for apparatus for cooling residues with gas.

204, Chemistry: Electrical and Wave Energy, subclasses 246, 256, 258, 265, 270, and 277, for cells having means to feed gas thereto. (Gas or Vapor Dispensers)

204, Chemistry: Electrical and Wave Energy, subclasses 245 through 247, 255-258, 263-266, 269, 270, and 275.1-278.5 for electrolytic cell feeders; and especially subclasses 246, 256, 258, 265, 270, and 277 for electrolytic cells having means to feed gas thereto (e.g., having a gas or vapor dispenser therefor, etc.).

206, Special Receptacle or Package, subclasses .6+ for gas storage means. (Gas or Vapor Dispensers)

206, Special Receptacle or Package, and see the notes for related art. (Container or Receptacle Structure)

209, Classifying, Separating, and Assorting Solids, particularly subclasses 19 through 37, 133+, for gaseous suspension type and 466-477 and 502, for stratifiers with gas treatment means. (Gas or Vapor Dispensers)

209, Classifying, Separating, and Assorting Solids, particularly subclasses 233+ for sifters. (Pattern or Sifter Form Outlet and With Material Separator)

210, Liquid Purification or Separation, sections 12, 13; subclasses 198.1+ for, inter alia, means for dispensing materials in combination with a Class 210 separator, and subclasses 523+ for mechanical means for removing a constituent from a gravitational separator.

210, Liquid Purification or Separation, subclasses 348+ for filters, per se. (Pattern or Sifter Form Outlet and With Material Separator)

210, Liquid Purification or Separation, subclass 248 for separators for that class having a drip, overflow or content draining feature. (Drip Leakage or Waste Catchers)

210, Liquid Purification or Separation, subclass 92 for filters with a test valve, subclasses 198.1+ for means to add treating material to a separator, and subclasses 514+ for portable invertible separators. (Dipping and Sampling)

209, Classifying, Separating, and Assorting Solids, subclass 642 for assorters involving throwing. (Throwers, Sprayers, Scatterers, and Dusters)

215, Bottles and Jars, subclasses 40+ for neck structure, and subclasses 307+ for closures providing means whereby the interior of the closure is communicable with the exterior. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

215, Bottles and Jars, subclasses 200+ for closures under that class (215) definition. (Closures)

217, Wooden Receptacles, subclasses 98+, for barrel bungs. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

220, Receptacles, subclasses 581+ for a high-pressure-gas tank. (Gas or Vapor Dispensers)

220, Receptacles, and see the notes for related art.

220, Receptacles, subclasses 200+, and the places set forth in the notes thereto for rigid closures. (Closures)

223, Apparel Apparatus, subclass 43 for devices for turning garments, bags, and tubular articles inside out by applying fluids under pressure thereto, and subclass 67 for inflatable forms. (Gas or Vapor Dispensers)

226, Advancing Material of Indeterminate Length, appropriate subclasses for methods of, and apparatus for, feeding material without utilizing the leading or trailing ends to effect movement of the material.

228, Metal Fusion Bonding, subclasses 33+ and 52 for fusion bonding apparatus having dispensing means.

232, Deposit and Collection Receptacles, for receptacles (such as ballot fare and letter boxes, etc.) specially designed to have one person deposit and another collect the deposited article.

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 650+ for a vehicular type road sander comprising a container for nonfluid material and means to scatter or strew the material over an extended area. (Sanding or Abrading)

229, Envelopes, Wrappers, and Paperboard Boxes, subclass 125.04 for a paperboard box having a nonunitary (i.e., separate, attached) closure usable egress opening). (Closures)

251, Valves and Valve Actuation, subclass 117 with restrictor in parallel to main valve, and 118+ for serial valves and flow restrictors. (Restricters, Pipe and Tubular Conduit Structures)

251, Valves and Valve Actuation, and see the places set forth in the notes thereto. (Valves and Valve Actuation)

239, Fluid Sprinkling, Spraying, and Diffusing, subclass 271 for spraying devices with attached penetrating means; subclass 309 for seal puncturing means for providing a discharge opening in a supply holder; subclass 445 for nozzles having means for selectively delivering a high or low pressure stream of fluid; other appropriate subclasses for desired nozzle structure, per se.

229, Envelopes, Wrappers, and Paperboard Boxes, and see the Notes for related art. (Container or Receptacle Structure)

229, Envelopes, Wrappers, and Paperboard Boxes, for a paperboard box combined with an external material flow guide means (e.g., nozzle, spout, pouring lip, etc.) except when such guide means has a cutting or punch feature. Class 229 also provides for a paperboard box combined with internal material guide means which means are limited to utilizing the force of gravity to guide material contents (e.g., internal inclined ramp which utilizes gravity to urge material toward an egress opening), also, search subclasses 214, 215+, and 248+ for a paperboard box having a reusable closure which is opened by tearing along a weakened line or adhesive seam, and which forms a pour spout when in its open configuration. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

235, Registers, for register structure where no significant dispensing features are claimed, even though a dispenser or meter is named as operating the register. (Volume or Rate of Flow Meters, Recorders, Registers)

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 120+ for spray fluid systems having means to catch or otherwise dispose of material escaping or leaking from the system through uncontrolled paths or beyond the last point of control. (Drip Leakage or Waste Catchers)

239, Fluid Sprinkling, Spraying, and Diffusing, subclass 374 and 548+, for pattern flow outlets for fluid spraying nozzles. (Pattern or Sifter Form Outlet and With Material Separator)

239, Fluid Sprinkling, Spraying, and Diffusing, appropriate subclasses for devices which project streams of fluid (as fireman's nozzles) and for sprinkling liquids; subclasses 650+ for a container for nonfluid material and means to scatter or strew the material over an extended area, the material being of any type (e.g., fertilizer, seed, insecticide, etc.). Liquid dispensers not having the special features for Class 239 are in Class 222. (Throwers, Sprayers, Scatterers, and Dusters)

241, Solid Material Comminution or Disintegration, subclass 168, for hand supported comminutors for condiments. (Hand Manipulable Shakers)

244, Aeronautics, subclasses 98 and 99, for arrangements for inflating and releasing buoyant gas from lighter-than-air craft. (Gas or Vapor Dispensers)

248, Supports, subclasses 75+ for hose and/ or nozzle supports. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

241, Solid Material Comminution or Disintegration, for comminuting processes and apparatus and such steps or means combined with feeding and/or discharging, dispensers, per se, being in Class 222 or other appropriate dispenser classification. See Lines With Other Classes and Within This Class, Material Handling, Exacavating, Distributing, Harvesting, in the main class definition of Class 241, for a further statement of the line. See also Lines With Other Classes and Within This Class, Hand Manipulable Shakers, in the class definition of Class 222.

248, Supports, subclasses 128+ and 146+, for receptacle stands, 196, for receptacle easels 311.2+, for receptacle holding brackets, and 318, for suspended supports for receptacles or bowls.

251, Valves and Valve Actuation, subclasses 149+ for separable flow path sections with a coupling operated valve in one wherein one section may be of the barrel bushing type and the other section a spout; and subclass 155 for valve nozzles and spouts. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

261, Gas and Liquid Contact Apparatus, for dispensing organizations combined with gas and liquid contact means where the gas pressure discharge assistant means is arranged to secure intimate contact and mixing of the gas pressure medium and the liquid being dispensed. Such arrangements include (1) projection or positioning of an additional gas pressure fluid inlet below the surface of a liquid for contact purposes, (2) particular configuration or perforation of a gas inlet to secure more intimate contact, and (3) provision of mixing means to insure more intimate contact. Dispensing devices disclosed as contact devices (as aerators, carbonators, etc.) are classified in Class 222 unless contact means of the nature described in the statement of the line hereinabove are claimed. (Gas or Vapor Dispensers)

261, Gas and Liquid Contact Apparatus, and see appropriate subclasses for feeding and discharging liquids to and from discharge apparatus.

264, Plastic and Nonmetallic Article Shaping or Treating: Processes, appropriate subclasses for processes of molding or shaping plastic materials within the class definition; and see References to Other Classes in Class 222 for the reference to Class 264. (Combinations of Dispenser and Independent Receiver)

264, Plastic and Nonmetallic Article Shaping or Treating: Processes, appropriate subclasses for processes of shaping or molding of plastic materials within the class definition. See particularly subclasses 176.1+ for formation of indefinite length or continuous articles by extrusion, and subclasses 299+ for casting or mold or die casting for processes not more specifically provided for above, therein. (Shaping Material by Extrusion)

285, Pipe Joints or Couplings, subclasses 154.1+ for a joint between a pipe or cable and box, subclasses 136.1+ for a pipe or rod-to-pipe-to-plate coupling, and subclasses 189+ for an end-to-plate coupling. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

291, Track Sanders, subclasses 46+ for sand delivery nozzles. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

291, Track Sanders. (Sanding or Abrading)

291, Track Sanders. (Combinations of Dispenser and Independent Receiver)

294, Handling: Hand and Hoist-Line Implements, subclasses 49+ for hand shovels and subclasses 68.2+ for hoisting buckets adapted for dumping a load. (Dipping and Sampling)

294, Handling: Hand and Hoist-Line Implements, subclasses 68.2+, having the hoisting bucket type of implement with discharging means.

296, Land Vehicles: Bodies and Tops.

296, Land Vehicles: Bodies and Tops, subclass 38, for drip pans located between the load and running gear to catch liquid dripping from the load. (Drip Leakage or Waste Catchers)

314, Electric Lamp and Discharge Devices: Consumable Electrodes, subclasses 21+ for combinations with means for feeding materials to the discharge space.

315, Electric Lamp and Discharge Devices: Systems, subclasses 111.01+ for combinations with means to feed fluent materials to the discharge space.

346, Recorders, for recorder structure, where no significant dispensing features are claimed, even though a dispenser or meter is named as operating the recorder. (Volume or Rate of Flow Meters, Recorders, Registers)

361, Electricity: Electrical Systems and Devices, subclasses 212+ for nozzles and spouts combined with means discharging or preventing accumulation of electric charges. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

366, Agitating, subclasses 3+ and 10+ for process and apparatus for incorporating gas in a mortar mix, or utilizing gas for mixing, discharging, or conveying. (Gas or Vapor Dispensers)

366, Agitating, subclass 262 for pump type agitators. (Pumps)

366, Agitating, subclasses 129+ for hand manipulated agitators, and see the class definition of Class 366 for the line between these classes. (Hand Manipulable Shakers)

374, Thermal Measuring and Testing, subclass 157 for a thermometer combined with a sampling cup. (Dipping and Sampling)

400, Typewriting Machines, subclasses 470+ for a typewriter having a dispenser for liquid ink.

401, Coating Implements With Material Supply, appropriate subclasses, for the combination of a coating tool including dispensing means which supplies coating material either to the tool or to a work surface for a spreading operation by the tool (see particularly subclass 136 and 137+, for the latter).

401, Coating Implements With Material Supply, subclass 15, for a hand manipulated coating device with material supply having a splash guard or a drip catcher. (Drip Leakage or Waste Catchers)

405, Hydraulic and Earth Engineering, subclass 154.1 for subterranean or submarine pipe or cable laying, retrieving, manipulating, or treating. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

406, Conveyors: Fluid Current, subclasses 154+ for outlets for fluid current conveyors. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

406, Conveyors: Fluid Current, subclass 107, for means for discharging from the tube material that flows backwardly by gravity in the tube. (Drip Leakage or Waste Catchers)

406, Conveyors: Fluid Current, for feeding gas in pneumatic conveyor combinations. (Gas or Vapor Dispensers)

406, Conveyors: Fluid Current, subclasses 96+ for pumps having, in addition to a fluid intake, a solid material intake or some other structure peculiar to conveying solids in a fluid current generated by the pump. (Pumps)

406, Conveyors: Fluid Current, particularly subclass 71 and 157+ for such conveyors involving throwing or scattering. (Throwers, Sprayers, Scatterers, and Dusters)

414, Material or Article Handling, subclass 412 for a device for emptying a portable receptacle

wherein the device is provided with means for opening the receptacle prior to emptying and further wherein the means is of the rapturing or cutting type. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

414, Material or Article Handling, subclass 221 for apparatus for moving material between zones having different pressures and inhibiting any change in the pressure gradient existing therebetween, and wherein a path having a vertical component includes serially arranged valves. Valves and Valve Actuation)

414, Material or Article Handling, appropriate subclasses for the moving of material from a source to a destination, the source, in some instances, being in the nature of a dispenser. (Combinations of Dispenser and Independent Receiver)

414, Material or Article Handling, subclasses 147+ for a chamber of a type utilized for a heating function and a material charging or discharging means therefor. (Furnace Charging and Discharging)

414, Material or Article Handling, appropriate subclasses (e.g., 137+, 140+, 265, 328+, 333-402, 406+, etc.) for the loading or unloading of vehicles. (Vehicle Loading and Unloading)

414, Material or Article Handling, appropriate subclasses (e.g., 288+) for receptacle structure which cooperates with, or is otherwise peculiarly related to, means for charging or discharging the receptacle. (Container or Receptacle Structure)

415, Rotary Kinetic Fluid Motors or Pumps, appropriate subclasses for a nozzle combined with turbine structure. See section on Pumps, above, for a statement of the line with pumps. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

417, Pumps, subclass 198 for jet pump nozzles. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

431, Combustion, subclass 344 for a flame holder, fuel tank assembly. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

417, Pumps. (Pumps)

418, Rotary Expansible Chamber Devices. (Pumps)

418, Rotary Expansible Chamber Devices, for rotary expansible chamber pumps, per se. (Gas or Vapor Dispensers)

422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, appropriate subclasses for chemical apparatus involving chemical reactors and apparatus for carrying out physical reactions of the chemical type. Also fume generators. (Gas or Vapor Dispensers)

422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, appropriate subclasses for miscellaneous chemical apparatus. (Combinations of Dispenser and Independent Receiver)

423, Chemistry of Inorganic Compounds, subclasses 210+ for purifying or separating gaseous mixtures by a chemical reaction. (Gas or Vapor Dispensers)

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, appropriate subclasses for a molding machine for shaping or reshaping a nonmetal combined with means to feed stock material to a shaping surface; see the search notes under subclass 447 of Class 425. (Combinations of Dispenser and Independent Receiver)

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 197+ for a molding machine for nonmetals having a strainer for stock material upstream of the shaping area. (Pattern or Sifter Form Outlet and With Material Separator)

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 269+ for a molding machine comprising a dipping type shaping mandrel on which an article is formed; and subclasses 276+ for apparatus including means excavating from a bulk source with simultaneous shaping (e.g., ice cream scoop, etc.). (Dipping and Sampling)

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 80.1+ for a molding means including a scattering type material depositor for placing the material to be shaped on the shaping surface. (Throwers, Sprayers, Scatterers, and Dusters)

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 376.1+ for an extrusion type molding machine for a nonmetal; see the search notes thereunder. (Shaping Material by Extrusion)

429, Chemistry: Electrical Current Producing Apparatus, Product and Process, subclasses 72+ for batteries having electrolyte feeding means.

431, Combustion, subclass 117 for a liquid fuel burner having means to discharge overflow fuel from a vaporization or combustion zone; and subclass 119 for a burner having an escap-

ing material collector. (Drip Leakage or Waste Catchers)

431, Combustion, subclasses 159+ for a furnace with means dispensing fluid fuel into its combustion chamber. (Furnace Charging and Discharging)

433, Dentistry, subclasses 80+ for intra-oral dispensing apparatus used by dentists.

441, Buoys, Rafts, and Aquatic Devices, subclass 34 having buoys with oil distributors.

441, Buoys, Rafts, and Aquatic Devices, subclasses 88+ and 92+ for self-inflating body supporting buoyant devices for sustaining a user partially immersed in liquid. (Gas or Vapor Dispensers)

446, Amusement Devices: Toys, subclasses 15+ for bubble blowing toys.

449, Bee Culture, subclasses 9+ for a bee hive having a bee feeding provision, and subclass 48 for a free standing bee feeder.

446, Amusement Devices: Toys, subclasses 24+ for smoke dispensers; subclasses 166+ for a toy operated by a gravity fed fluent operated toys; and subclass 475 for other dispensing toys. (Gas or Vapor Dispensers)

451, Abrading, subclasses 75+ for a sandblasting machine. (Gas or Vapor Dispensers)

451, Abrading, particularly subclass 37 and 38+ for a sandblasting process, subclasses 75+ for a sandblasting machine, subclasses 446+ for an abradant-supplying accessory, and subclass 450 for an accessory for wetting a grindstone. (Sanding or Abrading)

451, Abrading, subclasses 90 and 102 for a sandblast nozzle. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

452, Butchering, subclasses 35+ for sausage stuffer nozzles. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

452, Butchering, subclasses 35+ for sausage stuffers. (Shaping Material by Extrusion)

460, Crop Threshing or Separating, subclasses 16+ for feeders for shellers and huskers.

472, Amusement Devices, particularly subclass 65 for an amusement illusion caused by visual imitation of an event occurring in nature, e.g., rain, snow, fire, etc.

493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, see subclasses 269+ for making a tube from a sheet or web.

604, Surgery, subclasses 23+ for gas application to the body for therapeutic treatment. (Gas or Vapor Dispensers)

604, Surgery, subclasses 187+ for hypodermic syringes; subclasses 272+ for needles, per se; and subclasses 275+ for nozzles inserted in the body. (Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices)

604, Surgery, subclasses 289+ for applying or removing material from the external surface of the body or the cutaneous layer.

SUBCLASSES

1 This subclass is indented under the class definition. Dispensing processes.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 1 for processes for dispensing articles not otherwise provided for.

2 This subclass is indented under the class definition. Dispensers having check control means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

153.01+, where check control means is claimed only as locking means.

SEE OR SEARCH CLASS:

194, Check-Actuated Controlled Mechanisms, appropriate subclass for patents disclosing a check controlled dispensing apparatus and claiming a specific feature of the control mechanism.

221, Article Dispensing, subclasses 151+ for article dispensers not otherwise provided for, and having means for blocking or disabling the ejector or releaser means thereof, such means often being disclosed as check-control means.

235, Registers, subclasses 379, 380, 381, and 383 for banking and credit card systems and mechanized stores, respectively, wherein either money or merchandise is released upon the sensing of a valid credit card and including means to debit the account of the individual receiving the money or merchandise.

3 This subclass is indented under the class definition. Dispensers disclosed for dispensing gas or vapor as its proximate purpose.

(1) Note. The terms “gas” and “gaseous” are used in the definitions of the indented subclasses to include vapor.

(2) Note. See Lines With Other Classes and Within This Class, Gas or Vapor Dispensors, in the main class definition for the distinction between dispensing of gases and vapors, and the use of gases and vapors to dispense other materials and for notes to other classes having gas or vapor dispensing, per se, or in various combinations.

(3) Note. The following notes to other subclasses in this class specifies the subclasses dealing by title or definition with devices that handle fluids (gases, vapors, or liquids) not involving dispensing of such fluids as the proximate purpose of the combination.

SEE OR SEARCH THIS CLASS, SUBCLASS:

53, and 152, for inert atmosphere providing means with and without automatic control means.

61+, 258, 261 through 263, 373, 389, 394+, for dispensers with fluid pressure discharge assistants in various combinations.

69, 332, 442, 468, and 478+, for vent passages in various combinations.

72, for dispensers having volume or rate of flow meters with gas separating means.

113, for dispensers with illuminator or burner.

130+, for combinations of dispensers with nondispensing container compartment or jacket.

146, for dispensers with heating or cooling means.

188, for dispensers with a fluid-trap-seal, for inlets or outlets.

190, for dispensers with material treatment or conditioning means.

195, for dispensers with gas agitation.

206+, for resilient wall dispensers in which the resilient wall device compresses contained fluids or feeds fluids under pressure to cause discharge.

334, for dispensers having fluid operated motors.

630+, for dispensers in which a flowing fluid contacts, picks up, and carries the material to be dispensed.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 63+ for respiratory control devices and subclasses 223+ for tire filling chucks and/or inflation stems.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 4+ for gas filling methods including tire inflating, and subclass 38 for means for filling tires with nongaseous materials.

152, Resilient Tires and Wheels, subclasses 415+, for tire inflating devices combined with tire or wheel, for inflating means intended to be associated with only one particular tire and for means for inflating one tire from another.

4 This subclass is indented under subclass 3. Dispensers having means, in addition to the gas dispensing means, to dispense nongaseous material.

(1) Note. If the gas is dispensed by itself, it may also be used as a discharge assistant, to aid in dispensing nongas materials.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 171+ for fluid separating traps and vents in fluid handling systems.

5 This subclass is indented under subclass 3. Dispensers claimed in combinations with a punch or a cutter.

SEE OR SEARCH THIS CLASS, SUBCLASS:

80+, for nongas dispensers with cutter or punch.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclass 19 for organizations in which a cutter or punch opens a gas cell to deliver gas pressure discharge assistant to refill a dispenser.

6 This subclass is indented under subclass 3. Dispensers having plural sources of supply connected to the outlet in parallel but controlled for successive use.

SEE OR SEARCH THIS CLASS, SUBCLASS:

129+, for other plural sources.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 113 for similar devices comprising plural inflows to a system controlled by the depletion of a source.

14 This subclass is indented under the class definition. Dispensers having means to terminate material discharge (i.e., cut-off), which means is caused to operate by some character of interconnection with mechanism which senses or determines volume or rate of flow, which mechanism is designed to be preset, (i.e., set at the desired volume or rate of flow) prior to initiation of the dispensing operation or at any time during the dispensing to discharge the final unit of a desired volume. The mechanism may be a volume meter, rate of flow meter, float, follower, pump, etc.

(1) Note. Selective presetting may involve only a choice between two or more fixed quantity dispensing mechanism which are volume or rate of flow controlled.

(2) Note. Cut-off in the case of reciprocating pump mechanism requires holding the pump against further operation not merely determining the length of a stroke.

(3) Note. Preset devices which operate mechanically, as by counting a number of mechanical movements, without regard to whether or not material is actually dispensed, are not here, nor under "automatic", but in appropriate following subclasses, especially under indicators, subclasses 23+ or timing mechanism, subclass 70.

(4) Note. See Lines With Other Classes and Within This Class, Volume or Rate of Flow Meters, Recorders, Registers, in the main class definition for the general line on volume or rate of flow meters.

SEE OR SEARCH THIS CLASS, SUBCLASS:

23+, for dispensers combined with recorders, registers, etc., without selectively preset volume or rate of flow operated cut-off, see note 3.

59+, for rate of flow mechanism operated cut-off without selective presetting means.

70, see note 3, for dispensers with mechanism to time discharge by operations other than counting dispensing cycles or units dispensed.

71+, for dispenser with volume or rate of flow metering without a cut-off operated thereby.

282+, for dispensers having discharge assistants with means to vary or adjust the volume discharged.

15 This subclass is indented under subclass 14. Dispensers having means for preventing a change of position of the volume selecting means while material is being discharged.

SEE OR SEARCH THIS CLASS, SUBCLASS:

34, for means to prevent setting a register to zero during discharge of material.

435, for dispensers having means to prevent adjustment of a volume varying means in a stationary trap chamber during discharge.

16 This subclass is indented under subclass 14. Dispensers in which the element that caused operation of the cut-off mechanism is brought to its beginning position as a part of the dispensing operation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

33, for registers in which the operating cycle includes reset to zero, there being no selectively preset cut-off.

17 This subclass is indented under subclass 14. Dispensers having (1) means controlled by the rate of flow and moving with the flow sensing means from a variably determined initial position to a fixed cut-off position, or having (2) means controlled by the accumulation of successive trapped volumes to set the cut-off operating means back step-by-step from a variably predetermined initial position to a fixed cut-off position.

18 This subclass is indented under subclass 17. Dispensers in which the controller member or indicator may make more than one rotation on its axis, which is also the axis of its scale or dial, before reaching its cutting-off point.

(1) Note. The member or indicator may follow a spiral path around its axis, as in following a screw or a spiral in a single plane.

19 This subclass is indented under subclass 18. Dispensers in which a dial type presetting member or indicator is connected with one or more additional dials by means of transfer mechanisms.

20 This subclass is indented under subclass 17. Dispensers in which the cut-off is effected by closing a valve.

21 This subclass is indented under subclass 14. Dispensers having means capable of being set in advance of dispensing to accumulate a single trapped volume selected from different possible quantities, and having means controlled by the trapped volume for cutting off the supply.

SEE OR SEARCH THIS CLASS, SUBCLASS:

64+, for material level controls for dispensing operations, not selectively preset, though in some cases capable of minor adjustment to insure accuracy in delivering the intended volume.

SEE OR SEARCH CLASS:

92, Expansible Chamber Devices, subclasses 13+, for adjustable stroke expansible chamber devices where no dispensing features are claimed.

22 This subclass is indented under subclass 14. Dispensers in which the cut-off is set during a metered discharge, to operate after the discharge of the unit which is being measured at the time the cut-off is set.

23 This subclass is indented under the class definition. Dispensers having signals, indicators, registers, recorders, gauges, or display devices for indicating a condition or performing a measuring function, such devices consisting of relatively movable, changeable, or audible information giving parts. A dispenser part as a piston, wall or drain pipe, may cooperate with a graduated part to form the indicator but devices in which one of the means to be inspected or compared is merely the material to be dispensed or its surface are not included.

(1) Note. See Lines With Other Classes and Within This Class, Volume or Rate of Flow Meters, Recorders, Registers, in main class definition for the general line on volume or rate of flow meters.

SEE OR SEARCH THIS CLASS, SUBCLASS:

52+, for automatic controls without the features of this subclass (23).

71, for volume or rate of flow meters without the features of this subclass (23).

77, for dispensers combined with weighing means.

113, for dispensers with an illuminator or fuel burner.

154+, for mere inspection devices.

192, for display and exhibiting means which do not indicate a condition or perform a measuring function.

SEE OR SEARCH CLASS:

34, Drying and Gas or Vapor Contact With Solids, subclasses 88 and 89.

40, Card, Picture, or Sign Exhibiting.

116, Signals and Indicators.

137, Fluid Handling, subclass 141, 213+ and 551+ for fluid handling systems combined with recorders, registers, signals or indicators.

198, Conveyors: Power-Driven, subclass 502.

215, Bottles and Jars, subclass 227, 230 and 365+.

221, Article Dispensing, subclasses 2+ for article dispensing devices combined with recorders, registers, signals or indicators.

229, Envelopes, Wrappers, and Paperboard Boxes, subclass 83.

235, Registers, subclass 379, 380, and 381 for banking and credit card systems and 383 for mechanized stores, respectively, wherein either money or merchandise is released upon the sensing of a valid credit card and including means to debit the account of the individual receiving the money or merchandise, and see Lines With Other Classes and Within This Class, Volume or Rate of Flow Meters, Recorders, Registers, in the definition of Class 222.

291, Track Sanders, subclass 17.

340, Communications: Electrical, subclasses 500+ for electric alarms or signals automatically responsive to a condition.

346, Recorders, and see Lines With Other Classes and Within This Class, Volume or Rate of Flow Meters, Recorders, Registers, in the definition of class 222.

24 This subclass is indented under subclass 23. Dispensers having means in the nature of a shutter for concealing the significant part of the recorder, register, etc., during portions of the dispensing cycle.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 7 for article dispensers not otherwise classified including dispenser operated register means.

235, Registers, subclass 24 for cash register indicator shutters.

25 This subclass is indented under subclass 23. Dispensers having two or more recorders, registers, indicators, signal devices, or exhibitors.

SEE OR SEARCH THIS CLASS, SUBCLASS:

24, for register and shutter combinations in which the shutter has a signalling function.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 552 for fluid handling systems having plural recorders, etc.

26 This subclass is indented under subclass 25. Dispensers having two or more information devices relating to a volume measuring function.

SEE OR SEARCH THIS CLASS, SUBCLASS:

14+, for such devices having also a selectively preset cut-off mechanism.

27 This subclass is indented under subclass 25. Dispensers having a register for counting or totalizing volumes discharged and a signal which usually gives information as to the operation or condition of the totalizer or counter.

SEE OR SEARCH THIS CLASS, SUBCLASS:

24, for registers and signals in which the signal conceals the register indication.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 7 for article dispensing devices having dispenser operated registers.

28 This subclass is indented under subclass 25. Dispensers having a common operating factor for two or more information devices, so that they operate simultaneously or proportionately. Volume and cost registers are included.

SEE OR SEARCH THIS CLASS, SUBCLASS:

26, where at least two of the information devices have a volume measuring function.

29 This subclass is indented under subclass 23. Dispensers having a signal reading point marker and a scale or set of indications consisting of plural lines or columns of different values or significance, or a plurality of scales or sets of indications.

SEE OR SEARCH THIS CLASS, SUBCLASS:

25+, for pairs of registers each having a pointer or reading point marker and a common operator.

30 This subclass is indented under subclass 23. Dispensers in which the information device is a recording means.

SEE OR SEARCH CLASS:

346, Recorders.

31 This subclass is indented under subclass 23. Dispensers in which the dispensing means operates an information device or a portion thereof by an adjustable connection so that the indication may be varied proportionately with relation to the discharge, usually to correct a measuring indication, or to transpose it into different terms, or in which an element of the information device is adjustable with reference to its mounting, or for adjustable information device elements where the effect is not felt proportionately through the range of the dispenser, but is merely an adjustment of a part and its support for accuracy.

32 This subclass is indented under subclass 23. Dispensers having an information device of the register or counter type in which provision is made for returning the parts to their initial or zero position, manually or by operation of the dispenser.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 7 for article dispensing devices including dispenser operated registers.

235, Registers, subclass 144, for register zero setting means not restricted to dispensers.

33 This subclass is indented under subclass 32. Dispensers in which the register parts are set to zero by the operation of the dispenser as a part of a discharge cycle. The indication to be set back is usually one remaining from the previous dispensing operation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

16, for registers, etc., having an element that causes operation of the cut-off mechanism, and set to starting position as a part of the discharge cycle.

34 This subclass is indented under subclass 32. Dispensers having means to prevent setting the register to zero while material is being discharged.

SEE OR SEARCH THIS CLASS, SUBCLASS:

15, for selectively preset mechanism with means to prevent change of setting during discharge.

435, for means for preventing change of volume adjusting means of a stationary trap chamber during discharge.

35 This subclass is indented under subclass 32. Dispensers having means to prevent the initiation of a discharge operation unless the register is at its initial or zero position.

36 This subclass is indented under subclass 23. Dispensers having a totalizer which counts the successive operating cycles of the dispenser.

(1) Note. An operation cycle consists of the period from the beginning of a discharge until the dispenser parts and the state of the trap, if any, as regards material level, again reach the condition at which discharging started. Thus one discharging operation may include either one or any desired number of cycles.

(2) Note. Dispensers of the forcer type, gravity trap, conveyor trap, or flow meter type may be included, and groups of cycles may be counted instead of single cycles.

SEE OR SEARCH CLASS:

177, Weighing Scales, subclasses 18+ for a weigher with a cycle totalizer.

221, Article Dispensing, subclass 7 for article dispensing devices having dispenser operated registers.
235, Registers, particularly subclass 94.

37 This subclass is indented under subclass 36. Dispensers in which the volume discharge per operating cycle may be varied, or the dispenser has different or varying cycles of operation, and the totalizer is operable in accordance therewith.

38 This subclass is indented under subclass 36. Dispensers in which the dispenser part operating the totalizer has a to and fro motion.

39 This subclass is indented under subclass 23. Dispensers in which the information device is audible.

SEE OR SEARCH CLASS:
116, Signals and Indicators, appropriate subclasses particularly subclasses 137+, 147 and 148+.
137, Fluid Handling, subclasses 213+ for whistle type vents in diverse fluid containing pressure systems.
221, Article Dispensing, subclass 3 for article dispensing devices having audible signal or indicator means.
291, Track Sanders, subclass 17.
340, Communications: Electrical, subclasses 384.1+ for electrical audible signals or alarms.

40 This subclass is indented under subclass 23. Dispensers in which (1) the information device is operated by the flow of material either through the usual dispenser channels or overflowing therefrom, or (2) the surplus material flows out of an opening specially provided for signaling purposes.

SEE OR SEARCH THIS CLASS, SUBCLASS:
36, for totalizers operated by flow meters. The mere fact that flow is taking place is shown here.
159, for transparent devices for observing flow, without the aid of a flow-operated movable element.

SEE OR SEARCH CLASS:
116, Signals and Indicators, subclasses 112 and 264+.
340, Communications: Electrical, subclasses 603+ for electrical automatic fluent material responsive indicating systems.

41 This subclass is indented under subclass 23. Dispensers having means giving information as to the position or range of motion of a dispenser part, as a valve, follower, piston, or adustable wall. The means ordinarily comprises a scale and pointer, but a dispenser part, as an edge of a wall or the end of a projecting part may serve as a pointer or reference point.

SEE OR SEARCH CLASS:
116, Signals and Indicators, particularly subclasses 200+ for scale and pointer subcombinations.
137, Fluid Handling, subclasses 553+ for fluid handling systems having position or extent of motion indicators.
221, Article Dispensing, subclasses 4+ for article dispensing devices in which a dispenser part, position or adjustment is indicated by indicating means.

42 This subclass is indented under subclass 41. Dispensers in which the position or selection for use, of one of a plurality of valves, outlets, traps, or other dispenser parts having equivalent functions, is shown.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclass 555 for fluid handling systems having means for indicating selection from among plural branches.
221, Article Dispensing, subclass 5 for plural source article dispensing devices having article selection indicating means.

43 This subclass is indented under subclass 41. Dispensers in which the indicator serves as a stop for the movable part as well as showing its position or extent of motion. Indicators showing the setting of one of a plurality of selectively usable stops are here also.

44 This subclass is indented under subclass 41. Dispensers in which the indicator comprises a scale and pointer, having a series of detents accompanying or serving as the graduations of the scale, the effect being to check or hold the indicator and the dispenser part in the indicated position.

45 This subclass is indented under subclass 41. Dispensers in which the moving element of the indicator is flexibly connected with the movable dispenser part. The scale indicia may be placed on the flexible part.

(1) Note. Actuation by an endless drive means is not included, even though the means is flexible.

46 This subclass is indented under subclass 41. Dispensers in which a movable dispenser part is operated by a screw which also carries or serves as an indicator element.

47 This subclass is indented under subclass 41. Dispensers in which the indicator part is rigidly carried by a movable dispenser part. The dispenser part may itself constitute an element of the indicator, as the end of an inlet or outlet pipe, or of a piston.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclass 556 for fluid handling systems having an indicator element rigidly carried by a movable system part.

48 This subclass is indented under subclass 47. Dispensers in which the dispenser part carrying or serving as the indicator element has a pivoted or rotary motion.

49 This subclass is indented under subclass 47. Dispensers in which the indicator element comprises or is carried by a reciprocable dispenser element projecting from the container.

SEE OR SEARCH THIS CLASS, SUBCLASS:
47, for telescoping container parts carrying indicator elements.

50 This subclass is indented under subclass 49. Dispensers in which the scale is placed on the container wall or mounted to extend therefrom.

51 This subclass is indented under subclass 23. Dispensers in which the information device is a float level indicator.

SEE OR SEARCH CLASS:
33, Geometrical Instruments, subclasses 717+ for sounding type distance measuring.
73, Measuring and Testing, subclasses 305+ for float type liquid level or depth gauges, and subclass 322.5 providing for floats, per se.
116, Signals and Indicators, subclasses 110+ for float operated liquid level indications.
137, Fluid Handling, subclass 558 for liquid level responsive indicator, recorder or alarm.
340, Communications: Electrical, subclasses 612+ for electrical automatic fluent material level responsive indicating systems.

52 This subclass is indented under the class definition. Dispensers having means to sense some condition, which means causes operation of a control device.

(1) Note. The above definition excludes valves, closures, and nozzles, directly operated by the pressure or flow of the material (e.g., check valves), or by gravity or inertia. See the following notes.

(2) Note. Automatic controls are associated with subject matter of most of the classes. Only those will be set forth in the notes to this and the indented subclasses which appear most nearly related to the combinations of this class.

SEE OR SEARCH THIS CLASS, SUBCLASS:
14+, for cutoffs operated by selectively preset volume or rate of flow mechanism.
23+, for automatic controls where a recorder, register, indicator, signal or exhibitor is claimed.

332, 375, 380, 387, 396, 400, 490, and 491+, for various combinations including valves, closures, and movable nozzles directly operated by the pressure or flow of material.

353, 437, 457, and 479, for barometric and angle of repose devices in various combinations.

500, for gravity and inertial operated closures and valves.

SEE OR SEARCH CLASS:

4, Baths, Closets, Sinks, and Spittoons, appropriate subclasses for automatic controls associated with the subject matter of such class. It is noted that this class includes such dispensing, per se, for the special purposes of the class (4).

34, Drying and Gas or Vapor Contact With Solids, subclasses 524+ particularly subclasses 573+, for automatic controls for the subject matter of such class.

118, Coating Apparatus, subclasses 663+ for coating apparatus having automatic control features.

119, Animal Husbandry, appropriate subclasses. Many of the devices in this class, particularly in subclasses 51+ and 72+ are dispensers, per se, for the special purposes of this class.

122, Liquid Heaters and Vaporizers, subclasses 446 through 458 and 504+.

137, Fluid Handling, subclasses 38+ for control by change of position or inertia of the system; subclasses 47+ for speed responsive valve control; subclasses 59+ for freeze condition responsive safety systems; subclasses 65+ for combustion failure responsive fuel safety cutoffs; subclasses 67+ for destructible or deformable element control; subclasses 78.1+ for atmospheric change responsive control; subclasses 82+ for pressure modulators, relays or followers; subclasses 87.01+ for self-proportioning or correlating systems; subclasses 386+ for liquid level responsive or maintaining systems; and subclasses 455+ for line condition change responsive valves, including safety cut-off, pop, pressure regulating and directly responding safety and check valves.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 192+ for filling apparatus having automatic control of flow cut-off or diversion of material to the receiver.

159, Concentrating Evaporators, subclass 44 for automatic fluid feed and discharge devices.

169, Fire Extinguishers, subclasses 7+ for automatic chemical pressure generating systems, subclasses 19+ for automatic valves, 26+ for automatic receptacles, 56+ for condition responsive control for special applications.

177, Weighing Scales, subclasses 60+ for material control responsive to a weigh chamber.

184, Lubrication, subclasses 66+ for gravity feed lubricators with automatic cutoff.

192, Clutches and Power-Stop Control, subclasses 116.5+ for automatic stop mechanism.

198, Conveyors: Power-Driven, appropriate subclasses for different types of conveyors or systems of plural conveyors having operation control means responsive to a condition of a conveyor or to a condition of the conveyed load.

209, Classifying, Separating, and Assorting Solids, subclasses 509+, for automatic assorting, subclasses 491 and 496, for automatic control of discharging.

210, Liquid Purification or Separation, subclasses 97+ for fluid pressure, flow or material level responsive devices which may include material feed controls, particularly subclass 101.

217, Wooden Receptacles, subclasses 100+ for automatic valved bungs.

221, Article Dispensing, subclasses 9+ for article dispensing devices not otherwise provided for, having automatic control means.

235, Registers, subclasses 379, 380, 381, and 383 for banking and credit card systems and mechanized stores, respectively, wherein either money or

merchandise is released upon the sensing of a valid credit card and including means to debit the account of the individual receiving the money or merchandise.

241, Solid Material Comminution or Disintegration, subclasses 34+ for automatic feed controls associated with comminutors.

251, Valves and Valve Actuation, subclasses 15+ for valves having a compulsory cut-off after a flow period initiated automatically.

414, Material or Article Handling, appropriate subclasses (e.g., 161, 270, 294+, 307, 315+, etc.) for a chamber or receptacle and material charging or discharging means therefor, and wherein the means is responsive to a condition of the chamber/receptacle, the material or the means.

53 This subclass is indented under subclass 52. Automatic control means applied to dispensers having either or both (1) means to jacket the material conveying conduits, or (2) means to provide a nonmaterial discharging inert atmosphere for the material to be dispensed, including means to evacuate gases from the container.

(1) Note. The inert atmosphere may be chemically inert, i.e., not reactive chemically with the material, or it may be one which is not combustible with vapors given off by the material.

SEE OR SEARCH THIS CLASS, SUBCLASS:

61, for automatic controls for a fluid pressure medium which causes material discharge, even though such fluid pressure medium provides an inert atmosphere.

152, for the means provided for in this subclass (53) without automatic control.

190, for means to humidify a dispenser receptacle or means to absorb moisture from its atmosphere.

195, 209, 258, 261-263, 334, 373, 389, 394+, and 630+, for fluid flow discharge, gas agitation, or fluid pressure mediums causing discharge by acting on pumps, followers, etc., or by acting directly on material, even though the fluids used for such purposes are inert to the material being dispensed.

SEE OR SEARCH CLASS:

169, Fire Extinguishers, for means to provide inert atmosphere to smother or prevent starting of fires, particularly subclasses 66+.

422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclasses 42+ for preserving processes involving providing a protective layer.

54 This subclass is indented under subclass 52. Dispensers in which the condition sensing means is either soluble in a liquid or is responsive to a change in temperature.

SEE OR SEARCH CLASS:

49, Movable or Removable Closures, subclasses 1+ for a thermal control for closures.

109, Safes, Bank Protection, or a Related Device, particularly subclass 33 for fusible, combustible or thermal actuators.

119, Animal Husbandry, subclass 73 for temperature controlled watering devices.

122, Liquid Heaters and Vaporizers, subclasses 504.1 and 504.3 for fusible safety devices.

126, Stoves and Furnaces, subclass 287.5 for fusible release dampers.

137, Fluid Handling, subclasses 59+ for freeze condition responsive safety systems; subclasses 65+ for combustion failure responsive fuel safety cutoffs; subclasses 67+ for frangible, fusible or soluble control elements; subclasses 79+ for atmospheric temperature change responsive control; subclass 457 for thermally responsive safetycut-offs requiring reset; and subclass 468 for valves responding automatically to changed thermal condition of the fluid controlled.

160, Flexible or Portable Closure, Partition, or Panel, subclasses 1+, for both thermal and soluble actuators.

169, Fire Extinguishers, appropriate subclasses, particularly subclass 42 for fusible connections, 56+ for condition responsive controls.

184, Lubrication, subclass 68 for thermostatic cut-offs for gravity feed lubricators.

220, Receptacles, subclasses 89.1 through 89.4 for frangible or fusible safety attachments.

236, Automatic Temperature and Humidity Regulation, which includes valves actuated by temperature responsive means and especially subclasses 12.1+ for automatic mixture control by temperature or heat content.

337, Electricity: Electrothermally or Thermally Actuated Switches, appropriate subclasses for electrothermal or thermally actuated switches.

374, Thermal Measuring and Testing, subclasses 100+ for a thermometer.

454, Ventilation, subclass 28 for a thermally released outlet cowl and subclass 369 for thermally actuated fire dampers used in ventilating systems.

55 This subclass is indented under subclass 52. Dispensers having means which responds to the volume, weight, or pressure of material already discharged without restraint on such material and correspondingly affects the discharge means employed, usually to secure uniformity of discharge regardless of varying conditions of the material as to specific gravity, etc., thus giving a constant feed from the source regardless of rate of use.

SEE OR SEARCH THIS CLASS, SUBCLASS:

56, for dispensers having a source delivering to a receiver which is also discharging, there being means responsive to the quantity of material in the receiver to control discharge from the source thus containing a variable feed from the source due to the rate of use.

57, for dispensers controlled by the volume, weight, pressure or rate of flow of a second material.

353, 437, 457, and 479, for barometric or angle of repose devices in various combinations.

SEE OR SEARCH CLASS:

19, Textiles: Fiber Preparation, subclasses 204+ for regulation of the fibers fed during cleaning.

177, Weighing Scales, subclasses 116+ for a weigher which cuts off the feed after a predetermined weight is accumulated in the weigh chamber.

56 This subclass is indented under subclass 52. Dispensers having means controlling the rate of discharge from a source, the means being responsive to the quantity of material in a receiver which is also discharging material thus giving a variable feed from the source due to the rate of use.

(1) Note. Valved material discharge guides are included where means responsive to the pressure of the material is provided in the guide.

SEE OR SEARCH THIS CLASS, SUBCLASS:

55, for control by volume, weight, or pressure of material delivered from dispenser thus giving a constant feed regardless of rate of use.

57, for dispenser controlled by the volume, weight, pressure, or rate of flow of a second material.

353, 437, 457, and 479, for barometric or angle of repose devices in various combinations.

SEE OR SEARCH CLASS:

19, Textiles: Fiber Preparation, subclasses 204+, for regulation of fibers fed during cleaning.

48, Gas: Heating and Illuminating, subclass 53.4 for float valves for carbid dispensers controlled by the liquid level in an acetylene generator.

137, Fluid Handling, subclasses 386+ for level maintaining devices which may regulate inflow to a receptacle from which material is being removed.

57 This subclass is indented under subclass 52. Dispensers having means controlling the rate of discharge from a source, the means being responsive to the volume, weight, pressure, or

rate of flow of second material, for which dispensing means may or may not be provided.

SEE OR SEARCH THIS CLASS, SUBCLASS:

55, and 56, for dispensers controlled by the volume, weight or pressure of the material dispensed.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 3 for processes of mixing under conditions of automatic control, subclasses 87.01+ for self-proportioning or correlating fluid handling systems, especially subclasses 88+ for automatic mixture control, subclass 94 for fuel control by boiler or water system condition, subclasses 98+ for self-proportioning flow systems, and subclasses 111+ for self-controlled branched flow systems comprising plural inflow branches.

210, Liquid Purification or Separation, subclasses 109+ for discharge of treated material from a separator there provided for.

236, Automatic Temperature and Humidity, Regulation, subclasses 12.1+, for thermal control of mixing of two fluids.

58 This subclass is indented under subclass 52. Dispensers having means responsive to the weight of material in the supply container for controlling the discharge.

(1) Note. Valves or closures operated directly by material weight are not included (see note 1 to subclass 52), but movably mounted containers, self-adjusting by weight of their contents, and cut-offs interconnected to a relatively movable wall, false wall, or baffle which responds to varying weights in the container are here.

SEE OR SEARCH THIS CLASS, SUBCLASS:

332, 375, 380, 387, 396, 490, and 491+, for various combinations including valves, closures, and movable nozzles directly operated by the pressure or flow of material.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 403+ for fluid handling systems controlled by the weight of accumulated fluid.

406, Conveyors: Fluid Current, subclasses 24+ and 32+ for conveyors controlled by the weight of the load in an intake receptacle.

59 This subclass is indented under subclass 52. Dispensers in which means responsive to rate flow causes operation of cut-off means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

14+, for cut-offs operated by a selectively preset volume or rate of flow means, the selective preset being to select one from definitely different volumes or rates as distinguished from mere adjustment of the mechanism to secure accuracy.

SEE OR SEARCH CLASS:

4, Baths, Closets, Sinks, and Spittoons.

137, Fluid Handling, subclasses 459+, 486+ and 497+ for line condition responsive valves operated by change in the rate of fluid flow in the line.

251, Valves and Valve Actuation, subclasses 15+ for valves which are fluid controlled for automatic cut-off after being opened by nonautomatic means.

60 This subclass is indented under subclass 59. Dispensers in which the controller element is a cam which operates the cut-off at the end of a single complete revolution.

SEE OR SEARCH CLASS:

73, Measuring and Testing, for devices of this general type which are not manually tripped, but repeat their operation indefinitely for metering purposes.

61 This subclass is indented under subclass 52. Dispensers in which the automatic control is (1) of a dispenser utilizing a fluid under pressure to cause dispensing, or (2) of dispensers with fluid pressure discharge assistant.

SEE OR SEARCH THIS CLASS, SUBCLASS:

3+, for dispensers for dispensing gases or vapors and see the Note for the distinction between gas or vapor dispensers and gas or vapor discharge assistants.

53, and see the Notes thereto for nondispensing inert atmosphere providing means.

209, 258, 261 through 263, 373, 389, 394+, for fluid pressure discharge assistants in other combinations.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 154+ for diverse fluid containing pressure systems comprising traps for boiler feed and fluid separating traps.

62 This subclass is indented under subclass 61. Dispensers in which the fluid pressure medium is a liquid and the responsive means is a float, usually of lower specific gravity than one of the liquids and higher than the other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

395, for nonautomatic dispensers with a pressure liquid.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 154 for diverse fluid containing pressure systems for which the diverse fluids are liquids, and subclass 172 for fluid separating traps separating liquid from liquid.

210, Liquid Purification or Separation, subclasses 119, 120 and 121+ for float controls there provided for.

63 This subclass is indented under subclass 52. Dispensers in which the device controlled is a motor.

SEE OR SEARCH THIS CLASS, SUBCLASS:

333, and see the notes thereto for motor combinations not involving automatic control.

64 This subclass is indented under subclass 52. Dispensers having means responsive to the level of material to cause operation of some device. The material may be in a supply container, trap, passage, overflow receptacle, etc.

SEE OR SEARCH THIS CLASS, SUBCLASS:

21, for selectively preset level responsive mechanism for determining a single trapped volume.

56, for control by level in a dispensing-receiver.

62, for float controlled pressure liquids.

SEE OR SEARCH CLASS:

4, Baths, Closets, Sinks, and Spittoons, appropriate subclasses for water closets with liquid level controls.

137, Fluid Handling, subclasses 386+ for liquid levels responsive or maintaining systems.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 192+ for automatic control of flow cut-off or diversion.

184, Lubrication, subclasses 103.1+ for constant level lubricators.

221, Article Dispensing, appropriate subclasses for article dispensing devices not otherwise provided for including empty supply source responsive means, such devices being classified in subclasses 17+ and/or 108+ of that class (221).

414, Material or Article Handling, subclasses 295 and 296 for a static receptacle and means for charging or discharging the receptacle and wherein either the position of the charging means (subclass 295), or the drive of a charging conveyor (subclass 296), is responsive to the level of material in the receptacle.

431, Combustion, subclass 64 for a fuel burner having means maintaining a constant fuel level in a combustion zone.

65 This subclass is indented under subclass 64. Dispensers in which the level-responsive means operates to prevent manual operation of

some part of the dispenser unless the material is at the proper level.

66 This subclass is indented under subclass 64. Dispensers having means which senses the empty condition of a supply container and prevents further operation of the discharging means or prevents the forcing of air through a metering device.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclass 399 for low level safety cut-offs of tanks.

67 This subclass is indented under subclass 64. Dispensers in which the means which respond to the level of material is a float or float operated mechanism which operates a flow controller. The flow controller may be for inlet, outlet, vent, overflow, drain, or any dispenser outlet.

SEE OR SEARCH CLASS:
4, Baths, Closets, Sinks, and Spittoons.
119, Animal Husbandry, subclasses 78+ for float controlled watering devices.
137, Fluid Handling, subclasses 409+ for float actuated valves.
141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 42, 199+, 212+, 216, 220+, 229, and 303 for float controls in various combinations.
210, Liquid Purification or Separation, subclasses 119, 120 and 121+ for various combinations of float controls.
220, Receptacles, subclasses 216+ for float type closures.

68 This subclass is indented under subclass 67. Dispensers having two or more outlet elements controlled by a float or two or more level responsive float mechanisms for the same trap or container. They may be for the same or different types of outlet.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 391, 411 and 423 for liquid level responsive or maintaining systems involving plural floats and/or plural float controlled passages.

69 This subclass is indented under subclass 67. Dispensers having a float-operated controller for a venting outlet only.

71 This subclass is indented under the class definition. Dispensers having a volume or rate of flow meter for determining the quantity dispensed.

(1) Note. See Lines With Other Classes and Within This Class, Volume or Rate of Flow Meters, Recorders, Registers, in the main class definition for the general line on volume or rate of flow meters.

SEE OR SEARCH THIS CLASS, SUBCLASS:
14+, for volume and rate of flow meters with selectively preset cut-off mechanism.
23+, for volume and rate of flow meters combined with a recorder, register, indicator, signal, or exhibitor.
52+, for automatic control combinations, particularly subclasses 59+.

72 This subclass is indented under subclass 71. Dispensers having means for meter by-passing, gas separation, antisiphoning devices and/or means for priming the meter.

SEE OR SEARCH THIS CLASS, SUBCLASS:
318, for discharge assistant by-pass means.

SEE OR SEARCH CLASS:
73, Measuring and Testing, subclasses 198+ for the volume or rate of flow meter subcombination.
96, Gas Separation: Apparatus, for apparatus for gas separation, per se.
137, Fluid Handling, subclasses 171+ for fluid separating trap and vents in diverse fluid containing pressure systems.
138, Pipes and Tubular Conduits, subclasses 26+, for pressure compensators.

73 This subclass is indented under subclass 71. Dispensers having means for maintaining full pressure and/or relieving excess pressure in a

fluid filled hose at the outlet side of the meter (wet-hose type).

SEE OR SEARCH CLASS:
73, Measuring and Testing, subclass 276.

74 This subclass is indented under the class definition. Dispensers having means for supporting or guiding a movable discharge guide interconnected with means for controlling or causing discharge to prevent discharge when the guide is in nonuse position, or having actuators for switch or motor control means for dispensing mechanism interconnected with the movable material discharge guide or with an actuator for a discharge controller carried thereby.

(1) Note. Movable discharge guides which are connected to flow controllers or closures, so that when one is operated the others operate, are excluded, see subclass 537 and the notes thereto.

SEE OR SEARCH THIS CLASS, SUBCLASS:
320+, for movable nozzles connected to a discharge assistant to move therewith, and see the notes thereto.
538+, and see the notes thereto for miscellaneous movable discharge guides having means for housing or securing discharge guides in a position of nonuse.

SEE OR SEARCH CLASS:
34, Drying and Gas or Vapor Contact With Solids, subclass 87 for interlocks.
137, Fluid Handling, subclass 355.16 for combined hose holders and fluid supplies, especially subclass 355.18 in which hose movement controls flow of fluid.
192, Clutches and Power-Stop Control, subclasses 116+ for power stop interlocks.
239, Fluid Sprinkling, Spraying, and Diffusing, subclass 195 for spraying and discharging devices having combined therewith hose holders and fluid supplies, especially subclass 196 in which movement of the hose controls fluid flow.
242, Winding, Tensioning, or Guiding, subclasses 370+ for a reeling device which may wind various materials including a hose.
248, Supports, subclasses 75+ for hose and/or nozzle type supports.

75 This subclass is indented under subclass 74. Dispensers having connections or interlocks between a switch or motor control and an actuator for a discharge controller carried by a movable material discharge guide.

77 This subclass is indented under the class definition. Dispensers combined with weighing mechanism.

(1) Note. This is the residual subclass involving weighing. For weighing means in other combinations, the preceding subclasses should be considered.

SEE OR SEARCH THIS CLASS, SUBCLASS:
55, for constant weight control by output.
57, for control by weight of a second material.
58, for automatic control by weight of the material in the supply container.

SEE OR SEARCH CLASS:
177, Weighing Scales, subclasses 60+ for weigh pan responsive control of filling, or both filling and emptying, of the weigh pan; subclasses 145+ for a weigher having loading or unloading means; and subclasses 161+ for a weigher having a load guide.

78 This subclass is indented under the class definition. Dispensers where features of external configuration simulating some object are claimed.

SEE OR SEARCH CLASS:
221, Article Dispensing, subclass 24 for article dispensing devices not otherwise provided for and having external configurations simulating other things.
280, Land Vehicles, subclasses 827+ for velocipedes having means to simulate other things.

446, Amusement Devices: Toys, subclasses 268+ for a figure toy which may include a dispenser; and subclass 475 for other dispensing toys.

79 This subclass is indented under subclass 78. Dispensers made in simulation of a fire-arm.

(1) Note. The so-called "gun-type" dispensers are not here, even though they may have pistol type grips or other individual features simulating fire-arms. This subclass takes those devices which in their entirety simulate fire-arms, e.g., water guns.

SEE OR SEARCH CLASS:
42, Firearms.
89, Ordnance.
124, Mechanical Guns and Projectors, subclass 55, for a projector that impels a puff of gas.
362, Illumination, subclass 112, for imitation firearm type flash lights.

80 Dispensing devices claimed in combination with a punch or a cutter. The cutter or punch must be combined with dispensing features, or claimed in combination with a dispenser.

(1) Note. In this subclass are placed patents where the cutter or punch does not form a dispensing opening. Where two or more cutters or punches are provided and at least one forms a dispensing opening, see the subclasses below.

(2) Note. The punch or rupturing means does not have to function by cutting but may operate to knockout previously weakened portions or frangible closures.

(3) Note. See Lines With Other Classes and Within This Class, Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices, in the main class definition for related art in other classes involving hollow needles for puncturing a receiver of material dispensed and other dispensers associated with means to cut or puncture that which receives dispensed material.

SEE OR SEARCH THIS CLASS, SUBCLASS:
85+, and 87, for devices in which a nondispensing opening is formed in addition to forming a dispensing opening.
345+, for devices which strike off or level the charge in a conveyor type trap chamber, even though such device is designated a cutter.
544+, for discharge controllers not having an edge sharpened to cut off the dispensed material.

SEE OR SEARCH CLASS:
30, Cutlery, subclass 2 for carton openers and subclass 6.3, for can openers including means for forming a material guide in connection with the opening, and see the notes to the main class and subclass definitions of Class 30 for the search field on cutting processes, implements and machines.
83, Cutting, appropriate subclasses, for a cutting or punching device, and particularly subclass 660.
220, Receptacles, subclass 278, where the punch also serves as or is carried by a closure for the puncture, and there are no dispensing features (e.g., nozzles or pouring lips).
248, Supports, subclasses 216.1+, for brackets with support penetrating means.
408, Cutting by Use of Rotating Axially Moving Tools, subclasses 199+ for augers adapted to form dispensing openings in barrel-heads or bottle corks, when no dispensing feature is claimed.
414, Material or Article Handling, subclass 412, as explained in the reference thereto appearing in Lines With Other Classes and Within This Class, Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices, in the definition of this class (222).

81 This subclass is indented under subclass 80. Dispensers in which at least one cutter or punch is designed to form a dispensing opening in the container which holds the material to be dispensed.

(1) Note. Devices for dispensing gases are not included in this subclass and the indented subclasses. Such devices have been set up as a special group in preceding subclasses 3+.

SEE OR SEARCH THIS CLASS, SUBCLASS:

5, for gas pressure reservoirs, per se, combined with a cutter or punch to form an opening for dispensing the gaseous contents. (See (1) Note.).

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 15.14 for a process of tapping a pipe or tank (e.g., gas main, water main, keg, etc.) having an aperture forming cutter or cutting tool, or subclass 318 for tapping a pipe, keg, or apertured tank under pressure using aperture forming means.

221, Article Dispensing, subclasses 30+ for article dispensers not otherwise provided for, including cutter or punch means for forming openings in supply containers or in the wrapper thereof.

401, Coating Implements With Material Supply, subclasses 132+ for hand manipulated applicators of general utility having a tool, and a container for the material which must be ruptured in order that the material may be available to the tool.

82 This subclass is indented under subclass 81. Dispensers having discharge assistant means to discharge the contents of the container in which the opening has been formed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

251+, for definitions of “discharge assistant” and various types thereof, and see the notes to such subclasses for the location of the other combinations and subcombinations involving such means.

83 This subclass is indented under subclass 81. Dispensers having at least one cutter or punch mounted movably relative to other portions of the structure with which it is associated so that it may be moved relative to such associated structure to perform its cutting or punching operation.

(1) Note. The cutter or punch may be a permanent part of the receptacle whose contents are to be dispensed, as by being permanently mounted on or within the receptacle, or it may be a part of a device separate from the receptacle and movable relative to other parts of such separate device.

(2) Note. Where there are cutters or punches for forming plural openings, the relatively movable cutter or punch may be either the one for cutting the dispensing opening, or for cutting, venting and/or mutilating openings.

SEE OR SEARCH THIS CLASS, SUBCLASS:

85+, for other devices for forming plural openings, where none of the devices are mounted for relative motion.

83.5 This subclass is indented under subclass 83. Dispensers having a sleeve or rest into or on which the receptacle to be cut is placed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

86, for similar devices with nonmovable cutters for cutting plural holes.

88, for sleeves and/or rests combined with cutters.

85 This subclass is indented under subclass 81. Dispensers in which two or more distinct apertures are formed in the container whose contents are to be dispensed by the cutting or punching operation.

(1) Note. Where plural cutters or punches cooperate together to form a single aperture, the patent is not in this or the indented subclass but in other appropriate subclasses of this group.

(2) Note. Where plural cutters or punches which are alternatively usable but the organization and arrangement thereof is such that they are not operable on the

same receptacle to form plural openings, the patent is not in this or the indented subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

83, for plural devices in which at least one is mounted for relative motion.

86 This subclass is indented under subclass 85. Dispensers having a sleeve or a rest into or on which the receptacle to be cut is placed.

(1) Note. The sleeve or rest is ordinarily associated with a funnel or nozzle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

83.5, for similar devices with one or more relatively movable cutters.

88, for such devices having means to cut a single opening.

87 This subclass is indented under subclass 81. Dispensers having means for mutilating by cutting, crushing, or otherwise destroying the container, usually to prevent reuse.

SEE OR SEARCH THIS CLASS, SUBCLASS:

80, for cutters for preventing reuse where no dispensing outlet is formed.

85+, for cutting of openings in addition to the dispensing opening including openings to prevent reuse.

88 This subclass is indented under subclass 81. Dispensers in which there is a sleeve or rest into or on which the receptacle to be cut or punched is placed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

83.5, for similar devices with one or more relatively movable cutters.

86, for such devices for cutting plural openings and see the notes appended thereto.

89 This subclass is indented under subclass 81. Dispensers in which there is a nozzle associated with a cutter or punch, and in which there is means to secure the nozzle to the receptacle whose contents are to be dispensed.

(1) Note. Mere friction fit is excluded for which see other appropriate subclasses of this group.

SEE OR SEARCH THIS CLASS, SUBCLASS:

567+, for such attaching means without an associated cutter or punch.

SEE OR SEARCH CLASS:

285, Pipe Joints or Couplings, subclasses 18+ for couplings combined with assembly means, especially subclass 40 for a coupling comprising thread cutting means, and subclasses 189+ for end-to-plate joints, especially subclass 193 for a joint between a faucet and plate.

90 This subclass is indented under subclass 89. Dispensers in which that portion of the nozzle which extends within the receptacle whose contents are to be dispensed has associated with it a part which extends beyond the nozzle wall to engage or abut the inner side of the wall of the receptacle to hold the nozzle in place.

SEE OR SEARCH THIS CLASS, SUBCLASS:

91, where the only inner wall surface engaging means is a screw helix.

569, for similar mounting means without a cutter.

SEE OR SEARCH CLASS:

285, Pipe Joints or Couplings, subclass 191 for an end-to-plate coupling with means holding the members together comprising a bolt or hook in the flow.

91 This subclass is indented under subclass 89. Dispensers in which the means for securing the nozzle to the receptacle is of the screw type.

(1) Note. The screw helix may only partially surround the part which is inserted through the opening in the receptacle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

568, for such securing means without a cutter or punch.

92 This subclass is indented under the class definition. Dispensing devices in which one or more walls of the material container are made of nonresilient material which will deform (collapse) when pressure is applied thereto and will not return to its initial position.

(1) Note. Where characteristics of the collapsible wall or characteristics, of other parts of the combination which are present because of the collapsible wall are not claimed, the patent is not in this or the indented subclasses, but in the subclasses following this group, even though the container is broadly identified in the claims as a collapsible wall type.

(2) Note. This group of subclasses takes patents wherein the outer walls are collapsible as defined in the subclass definition. Internal collapsible members (as followers) are not included.

(3) Note. Tube deflating means comprising force exertive means applied to the exterior portions of the tube are here included as collapsible wall type receptacles.

SEE OR SEARCH THIS CLASS, SUBCLASS:

206+, for resilient wall type dispensers, even though the actual wall structure is collapsible if means for returning the wall structure to its initial position is provided.

386.5, for collapsible wall followers. See (2) note.

SEE OR SEARCH CLASS:

29, Metal Working, subclasses 17.1+ for sheet metal and foil manufacturing; and subclasses 400.1+ for miscellaneous processes of making hollow articles.

72, Metal Deforming, appropriate subclasses for a method or machine for making a metal tube or cup from a single-piece blank, particularly subclass 267 for “impact extrusion” and subclasses 347+ for “deep drawing”.

92, Expansible Chamber Devices, subclasses 89+, for collapsible wall expansible chamber devices.

138, Pipes and Tubular Conduits, appropriate subclasses for mere tubular conduit structures not disclosed as dispensing containers and not involving any other dispensing features. For a statement of the line, see the reference to Class 222 in the Search Class note to the class definition of Class 138.

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 327 and 328 for a sprinkling or spraying device comprising a supply holder with resilient or collapsible walls.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclass 65 for tube deflation accomplished by drawing a vacuum on the interior of the tube to deflate same where other necessary characteristics of Class 141 are present.

220, Receptacles, appropriate subclasses for collapsible container subcombinations, per se, not involving characteristics of the collapsible walls and not involving other dispensing features. See (1) Note to the definition of this subclass, above.

221, Article Dispensing, subclass 64 for article dispensers having flexible supply container walls and in subclass 65 for such dispensers having collapsible or telescoping supply container wall structure.

229, Envelopes, Wrappers, and Paperboard Boxes, for paper container subcombinations not involving characteristics of collapsible walls and not involving dispensing features at present classified in Class 229. Certain subclasses (such as subclass 7 and 17) of Class 229 contain dispensers and structures of the nature of the types now retained in that class (229) are classified in those subclasses.

264, Plastic and Nonmetallic Article Shaping or Treating: Processes, appropriate subclasses for processes of molding or shaping plastic materials, within the class definitions, to produce collapsible wall tubes. For spe-

cific subclasses pertaining to production of hollow articles, see subclasses 150,171.26+ 209.1+, 267+, 312, 512+, and 523+.

401, Coating Implements With Material Supply, appropriate subclasses, for an implement comprising a collapsible wall type reservoir in combination with a coating tool; and see (4) Note to the definition of subclass 143 of that class (401).

417, Pumps, appropriate subclasses for collapsible wall type pumps.

418, Rotary Expansible Chamber Devices, subclass 45 for a rotary expansible chamber device having a collapsible progressively deformed working chamber wall.

493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 269+ for making a tube from a sheet or web.

93 This subclass is indented under subclass 92. Dispensers having means to support or hold articles in addition to the collapsible wall receptacle.

94 This subclass is indented under subclass 92. Dispensers in which (1) two or more receptacles are claimed in combination and/or (2) a receptacle having plural compartments is claimed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

129+, for other plural receptacle or plural compartment receptacles.

95 This subclass is indented under subclass 92. Dispensers having means other than or in addition to mere manual squeezing or gravity flow to assist or cause discharge of the receptacle contents.

(1) Note. The majority of such means act on the wall structure to collapse the same. Some patents, all in this subclass (95), do not act on the wall structure, such as pumps, with the receptacle connected to the intake, atmosphere pressure causing collapse of the wall, and receptacles having a material follower therewithin, the walls being collapsed by hand.

SEE OR SEARCH CLASS:

401, Coating Implements With Material Supply, subclass 152 and indented subclasses 153, 154, and 155 for a hand manipulated coating device with material supply and a reservoir which has a nonresilient deformable wall or wall portion, the implement being provided with means to deform or collapse the wall or wall portion to force material to the tool from the reservoir.

96 This subclass is indented under subclass 95. Dispensers having means interconnected with the wall collapsing means for operating the valve or other discharge outlet flow controller or closure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

544+, and see the search notes for other valve and closure operators in this class.

97 This subclass is indented under subclass 95. Dispensers having at least two means of different types for acting on the receptacle wall to collapse same.

(1) Note. In this subclass, for example, and combined winding type and clamping type.

SEE OR SEARCH THIS CLASS, SUBCLASS:

95, or other appropriate type subclass, for plural wall collapsing means of the same type.

98 This subclass is indented under subclass 97. Dispensers having both the winding type of wall collapsing means as defined in subclass 99 and the roller type as defined in subclass 101.

99 This subclass is indented under subclass 95. Dispensers having an element which causes the tube wall to collapse and wind up into roll form.

(1) Note. These devices generally have an element (frequently called a key) to

engage the closed end of the receptacle and a handle to turn the same to perform the winding operation. It may be either separable or built into the receptacle structure.

100 This subclass is indented under subclass 99. Dispensers claiming (1) a casing to enclose the receptacle in whole or in part and/or (2) means to support the receptacle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

95, through 98, 101 through 105, to complete the search on support or casing combinations since the patents in such subclasses have not been cross-referenced on this combination.

160+, for movably mounted receptacles of other types and see the notes to such subclasses.

173+, for other types of receptacles with casing or support and see the notes to such subclasses.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 351+ for receiver actuated discharge means.

248, Supports, subclasses 108+ for supports for paste-tubes.

101 This subclass is indented under subclass 95. Dispensers in which the wall collapsing means comprises a roller which rolls over and applies pressure to the wall of the receptacle to cause the same of collapse and the contents to be forced out.

(1) Note. The rolling element may be of spherical or other noncylindrical form, and/or of irregular surface configuration.

102 This subclass is indented under subclass 101. Dispensers having more than one roller.

103 This subclass is indented under subclass 95. Dispensers in which the wall collapsing means operates by moving transversely against the receptacle wall to collapse the same by a clamping action.

(1) Note. The pressure applying elements may have motion longitudinally of the receptacle from the closed end toward the outlet in addition to the clamping motion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

95, for those devices operating by a sliding motion only.

101+, for slidable rollers.

104 This subclass is indented under subclass 95. Dispensers in which the wall collapsing means operates by twisting the collapsible walls.

105 This subclass is indented under subclass 92. Dispensers claiming (1) a casing to enclose the receptacle in whole or in part and/or (2) means to support the receptacle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

100, and see the notes thereto for the complete field of search.

106 This subclass is indented under subclass 92. Dispensers claimed in combination with features other than the receptacle structure and not provided for above.

(1) Note. Receptacle structure includes handles and/or handgrips, inlets and/or outlets and their valves, feed controllers and/or closures.

SEE OR SEARCH THIS CLASS, SUBCLASS:

192, and the subclasses preceding it in the schedule for combinations as defined in this subclass (106) where the receptacle is other than the collapsible wall type.

107 This subclass is indented under subclass 92. Dispensers in which the walls are made, at least in part, of nonmetallic material. The nonmetallic material may be a coating.

SEE OR SEARCH THIS CLASS, SUBCLASS:

100, and the other subclasses noted for casings in addition to the collapsible wall

receptacle and which may be of nonmetallic materials.

215, for resilient, nonmetallic wall receptacles.

SEE OR SEARCH CLASS:

229, Envelopes, Wrappers, and Paperboard Boxes.

108 This subclass is indented under the class definition. Dispensers in which means are provided to catch or otherwise dispose of material dripping, leaking, or being discharged as waste material.

(1) Note. By drip, leakage or waste is meant material which escapes to the exterior of a dispenser and which is not caught or received by the intended receiver, including condensate.

(2) Note. See Lines With Other Classes and Within This Class, Drip Leakage or Waste Catchers, in the main class definition for a general statement on drip, leakage, or waste catchers, and for notes to other classes having related art.

SEE OR SEARCH THIS CLASS, SUBCLASS:

571, for antidrip nozzle, spout, or pouring device structure.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 312+ for leakage or drip collecting in fluid handling systems.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclass 364 for a filling supply of dumping or draining type supported upon a receiver and see the search notes there included.

109 This subclass is indented under subclass 108. Dispensers having one or more passages formed for the special purposes of returning the drip, leakage, or waste to the dispensing receptacle interior from which it escaped.

SEE OR SEARCH THIS CLASS, SUBCLASS:

118, for material return to supply from an independent receiver.

318, for material return to supply from a discharge assistant.

424, for miscellaneous combinations involving material return to supply.

110 This subclass is indented under subclass 109. Dispensers having a valve controlling the return passage.

111 This subclass is indented under subclass 109. Dispensers having a cover which may be moved to expose some or all of the operating parts of the dispenser.

SEE OR SEARCH THIS CLASS, SUBCLASS:

182, for other patents having the feature.

113 This subclass is indented under the class definition. Dispensers having either, or both, (1) an illuminating means, or (2) a fuel burner which may be for either heating or illuminating purposes.

SEE OR SEARCH THIS CLASS, SUBCLASS:

131, where a jacket about a dispenser provides for heat exchange, there being no burner.

146, for miscellaneous heating and cooling means not having a burner.

SEE OR SEARCH CLASS:

110, Furnaces, subclass 260 for a solid fuel furnace provided with a fluid fuel burner.

126, Stoves and Furnaces.

137, Fluid Handling, subclasses 335+ for burners for heating material in fluid handling systems.

239, Fluid Sprinkling, Spraying, and Diffusing, subclass 18 for illuminated fountains, and subclasses 128+ for heating means for the spray apparatus of spray fluid.

362, Illumination, appropriate subclasses for other combinations of illuminator with other devices.

431, Combustion, appropriate subclass for a fuel burner, per se.

129 This subclass is indented under the class definition. Dispensers in which (1) the dispensing container is provided with a plurality of sepa-

rate compartments at least one having dispensing means, (2) two or more containers are claimed in combination, at least one being a dispensing container, or (3) a dispensing container has a jacket surrounding the same and spaced therefrom, at least in part, to provide a material or article receiving space.

(1) Note. Under (3) the jacket is usually provided for heat exchange purposes.

(2) Note. One or more devices arranged in series with the supply chamber, or with each other so that in the normal dispensing operation the material passes from one to the next in series to be discharged from the last of the series, are not in this subclass (129) or the indented subclasses, but are in subclasses following in the schedule, unless there is also claimed the subject matter of this subclass (129). Such series devices may be a discharge assistant, trap chamber, removable discharger, nozzle, etc.

(3) Note. The combination of plural dispensing compartments (one of which is a fluent material dispenser) is provided for in Class 221, Article Dispensing, and is classifiable in that class in subclass 96, thereof.

SEE OR SEARCH THIS CLASS, SUBCLASS:

6, for parallel connected gas or vapor dispensing devices serially used.

57, for automatic control of one dispensed material by the weight, volume, or pressure of a second dispensed material.

94, for plural receptacle or compartment devices of the collapsible wall type.

100, and 105, and the subclasses set forth in the Notes to the definitions, for collapsible wall type receptacles having casings, some of which are of the spaced jacket type.

188, for dispensers with a fluid trap seal for an inlet and/or outlet.

399, for gas pressure supplying reservoirs for fluid pressure dispensers.

SEE OR SEARCH CLASS:

53, Package Making, subclasses 147+ for apparatus to form groups of contents units and to subsequently package same.

122, Liquid Heaters and Vaporizers, subclass 401 for chemical feeders for boiler cleaners.

137, Fluid Handling, subclasses 3+ for processes of controlling mixtures; subclasses 87.01+ for apparatus for automatically controlling plural flows, especially subclasses 88+ for mixture condition maintaining or sensing controls; subclasses 111+ for plural inflows in branching systems; subclass 127 for sequentially parallel siphoning from plural tanks; subclass 240 for addition of separate material for cleaning purposes; subclasses 255+ for plural tanks or compartments with parallel inflow and/or outflow; subclass 268 for holders for solid, flaky or pulverulent material to be dissolved or entrained in the fluid; subclass 387 for washing machine cycle control by liquid level; subclasses 561+ for distribution systems, especially subclasses 565.29+ for plural pump systems; subclasses 594+ for systems having plural noncommunicating flow paths; subclasses 597 and 602+ for systems having multiple inlets and multiple and single outlets respectively.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclass 9 and 100+ for processes of and apparatus for filling with plural materials.

169, Fire Extinguishers, particularly subclasses 14+, 27 and 71+ for such subject matter involving plural sources.

177, Weighing Scales, subclass 61 for a weigh chamber translatable among plural sources.

210, Liquid Purification or Separation, subclass 101 for flow, fluid pressure or material level proportionate feed means, and subclasses 198.1+ for means to add treating material to a separator.

221, Article Dispensing, subclasses 92+ for article dispensing having plural sources, stacks or compartments, and see (3) Note, above.

236, Automatic Temperature and Humidity Regulation, subclasses 12.1+.

239, Fluid Sprinkling, Spraying, and Diffusing, subclass 656 for a device for scattering or strewing nonfluid material over an extended area and comprising plural containers for the material feeding to a single scatterer.

406, Conveyors: Fluid Current, subclasses 117+ for fluid current conveyors having plural intakes.

129.1 This subclass is indented under subclass 129. Dispensers for supplying a mixed beverage, comprising a cabinet or counter associated installation, plural sources of supply for the ingredients of the beverage, and means for dispensing the constituent parts of a single drink and intermingling such parts, within the apparatus, either before or during discharge.

(1) Note. These subclasses are limited to drink mixers as an art collection, as distinguished from dispensers for other materials, since the special problems of temperature conditioning, sanitation, attractive housing and ingredient mixing led to the development of peculiar associations of subcombinational features which appear best classified together. As examples, patents included in this group include claimed disclosures of heat exchange or cooling means (Classes 62 and 257), cabinet structures (Class 312) mixing nozzle means (Classes 137 and 299), and other fluid handling systems of the types classified in Class 137 and in later subclasses of Class 222.

SEE OR SEARCH THIS CLASS, SUBCLASS:

145, for dispensers having plural material sources in which the plural materials are dispensed from a single, common discharge outlet, but not having the cabinet or counter associated installation required for classification in this subclass.

146, for dispensers having heating or cooling means, and see the search notes to that subclass for other related search fields.

173+, for dispensers having supports, casings, etc., and see the search notes thereto.

SEE OR SEARCH CLASS:

62, Refrigeration, appropriate subclasses, particularly subclass 336, 338+ and 389+ (particularly subclass 390), and see the reference to Class 62 in the class definition, References to Other Classes, in this class (222).

99, Foods and Beverages: Apparatus, subclass 275 for similar beverage making and mixing combinations including specific material treatment means, as carbonating or cooking.

137, Fluid Handling, subclasses 170.5+ for drink dispensing of the type involving foam control in handling gas charged liquids; subclass 263 for a tank or trap receiving flowable material from at least two tanks or compartments; subclass 268 for holders having a supply of solid, flaky or pulverized material to be dissolved or entrained; subclasses 571+ for fluid handling systems comprising serial flow tanks or compartments; subclasses 583+ for fluid handling systems having plural openings, one a gas vent or access opening; subclasses 602+ for fluid handling systems having multiple inlets and a single outlet, especially subclasses 888+ and 896+ for those with means for mixing or combining plural diverse fluids.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclass 174 for drink dispensers combined with cup dispensers, and subclasses 105+ for those having plural materials which are discharged through a common outlet.

165, Heat Exchange, subclass 75 for a coil in an enclosure with a removable cover giving access to the space about the coil; and subclasses 140+ for a device providing heat exchange between three or more noncommunicating fluids.

239, Fluid Sprinkling, Spraying, and Diffusing, appropriate subclasses, especially subclasses 302+, 398+ and 549 for spray apparatus or nozzles which mix and then discharge plural materials.

312, Supports: Cabinet Structure, appropriate subclasses for cabinet structures not involving specific fluid dispensing means.

366, Agitating, for dispensers including mixed drink cabinet type dispensers having agitating means of the type classifiable in Class 366. The line between Classes 222 and 366 is set forth in Lines With Other Classes and Within This Class in the class definition of Class 366.

129.2 This subclass is indented under subclass 129.1. Dispensers in which the pressure of one of the constituent materials or energy derived from the flow thereof is instrumental in causing the dispensing or feeding of another material.

SEE OR SEARCH THIS CLASS, SUBCLASS:

57, for dispensers in which the rate of discharge from a source is automatically controlled in response to the volume, pressure or rate of flow of a second dispensed material.

133, for dispensers from plural sources in which there is a measured discharge from one source and indeterminate flow to another. In these devices the flow of one material is often instrumental in causing measured discharge of the other.

129.3 This subclass is indented under subclass 129.1. Dispensers having means for delivering metered or predetermined amounts of one or more of the constituent materials of the beverage.

SEE OR SEARCH THIS CLASS, SUBCLASS:

133, for dispensers from plural sources in which there is a measured discharge from one source and indeterminate flow from another.

129.4 This subclass is indented under subclass 129.3. Dispensers in which there are means for the metered dispensing of more than one of the constituents of a single mixed drink.

SEE OR SEARCH THIS CLASS, SUBCLASS:

135+, for plural source dispensers having a discharge assistant for each source which may measure the quantity dispensed from each source at every operation or cycle of the apparatus.

145.1+, for plural source dispensers in which the plural materials are discharged from a common discharge outlet which may have provision for discharging measured quantities of more than one of the plural materials.

130 This subclass is indented under subclass 129. Dispensers having at least one compartment, container, or spaced jacket which is not for dispensing.

(1) Note. The spaced jackets here are usually for heat exchange purposes or for receiving insulating material.

(2) Note. The additional containers or compartment here is usually for storing materials or articles and have nondispensing means associated therewith including exhibiting samples.

(3) Note. For plural receptacles or receptacles having plural compartments, none of the dispensing type, see the appropriate receptacle class.

SEE OR SEARCH THIS CLASS, SUBCLASS:

108, for compartments to catch waste leakage or drip.

182, where the nondispensing compartment merely houses or encloses some or all of the operating parts of the dispenser.

325+, for discharge assistant associated with a compartment, container or jacket which is solely for receiving a separable material supply container or cartridge.

538, where a nondispensing compartment is provided solely to house a discharge guide in a position of nonuse.

SEE OR SEARCH CLASS:

62, Refrigeration, subclasses 389+ for a withdrawable liquid cooler having means specialized to cooling, particularly subclass 400 for a concentric ice holder and liquid container.

150, Purses, Wallets, and Protective Covers, particularly subclasses 112+ for plural compartment type.

190, Trunks and Hand-Carried Luggage, there being many patents on plural compartment types, see particularly subclasses 3+, 29+, and 109+.

215, Bottles and Jars, subclass 6 for plural compartment type.

217, Wooden Receptacles, appropriate subclasses, for those having plural compartments, particularly subclasses 7+.

220, Receptacles, subclasses 600+ for compartment type.

221, Article Dispensing, subclasses 97+ for article dispensers having similar compartment arrangement.

312, Supports: Cabinet Structure, substantially all types of which may involve plural compartments, subclasses 118+ being of the stock and sample showcase type.

383, Flexible Bags, subclasses 38+ for plural compartment type.

131 This subclass is indented under subclass 130. Dispensers in which the nondispensing compartment or receptacle is a jacket or double wall spaced from a dispensing container wall, usually for heat exchange or insulation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

152, for conveying conduits with spaced jackets.

182, where the actuating parts of a dispenser are enclosed, and a cover therefor may be moved to expose the same.

183, for dispensers having jackets not spaced.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 375 for fluid handling systems having jacketed parts, in which the jackets may or may not be spaced form the jacketed part.

165, Heat Exchange, subclass 141 and 154+ for a receptacle having spaced jackets for heat exchanging mediums.

215, Bottles and Jars, subclasses 12.1+ for spaced wall or jacket devices.

220, Receptacles, subclasses 23.87+, 560.1, 592.15, and 592.23, for receptacles having inner and outer containers; subclasses 62.11+ for a receptacle having a wall that has a plurality of distinct layers; subclasses 23.91 and 903 for a receptacle having a jacket; and subclasses 560.12+, 592.09+, and 592.2+ for insulated receptacles.

221, Article Dispensing, subclass 286 for article dispensers having spaced casing structures included therewith.

312, Supports: Cabinet Structure, subclasses 35+ for magazine type article retaining cabinets, and other appropriate subclasses, for miscellaneous cabinet structures where no combination with bulk dispensing means is claimed.

366, Agitating, subclass 149 for an agitator with a spaced jacket.

132 This subclass is indented under subclass 129. Dispensers having at least three sources of supply or supply containers which are not duplicates as to the manner of discharging or supplying material.

133 This subclass is indented under subclass 129. Dispensers having provision for the discharge of a measured quantity from one source of material and an indeterminate or unlimited discharge from another.

(1) Note. The materials are usually intermingled after discharge.

(2) Note. For other combinations involving this character of operation, see the notes to other classes appended to subclass 129 of this class.

134 This subclass is indented under subclass 129. Dispensers having means for varying the discharge from the plural sources interconnected for uniform or proportional variations in each of the discharging volumes.

SEE OR SEARCH THIS CLASS, SUBCLASS:

267+, for single sources of supply having sets of discharging assistants with common discharge volume varying means.

282+, for single discharge assistants with discharge volume varying means.

434+, for trap chamber cut-off combinations with trap chamber volume varying means.

482+, for single supply containers having plural openings with flow controllers or closures for at least two of the openings.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 87.01+ for self-proportioning or correlating fluid handling systems.

135 This subclass is indented under subclass 129. Dispensers having a discharge assistant in connection with each source. Two or more may or may not be duplicates, or a single assistant or trap may act on the material from two or more sources.

SEE OR SEARCH THIS CLASS, SUBCLASS:

251+, for definitions of "discharge assistant" and see the notes thereto for the location of such means in other combinations.

SEE OR SEARCH CLASS:

19, Textiles: Fiber Preparation, subclasses 145+ involving assembling of different materials.

111, Planting, subclasses 73 and 80 for depositing plural materials.

221, Article Dispensing, subclasses 123+ for plural source article dispensing devices having discharge means for each source.

239, Fluid Sprinkling, Spraying and Diffusing, subclass 656 for plural containers holding nonfluid material and a single means to scatter or strew the material, with a discharge assistant for each container to force or deliver the material to the scattering or strewing means.

136 This subclass is indented under subclass 135. Dispensers having a discharge assistant in which the same structure acts on material from all sources, the material either contacting the discharge assistant on opposite faces or at different points, or inlets, but the material from all sources following the same path in or through the discharge assistant.

SEE OR SEARCH THIS CLASS, SUBCLASS:

139+, where there are more than one common rotary or swinging material contacting elements even though they are interconnected structurally to operate as a unit.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclasses 126+ for article dispensers having plural sources of articles to be dispensed and common selector means for the actuation of the discharging means for the plural sources.

137 This subclass is indented under subclass 135. Dispensers having unitary discharge assistants, in which those portions which contact the material dispensed have a reciprocating motion (i.e., do not rotate or swing about an axis) and which unit acts on material from all sources.

(1) Note. By "unitary discharge assistants" is meant those structures which are so interconnected structurally by means other than or in addition to relatively moving operating means as to both prevent relative motion and compel motion together.

SEE OR SEARCH THIS CLASS, SUBCLASS:

361, and see the notes thereto for other combinations having reciprocating trap chambers or discharge assistants.

138 This subclass is indented under subclass 135. Dispensers in which that portion of a discharge assistant for each source which contacts the material discharged has either a rotary or a swinging motion about an axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

136, for such devices in which a rotary or swinging assistant is common to all sources.

361+, and 367+, and see the notes thereto for other combinations having rotary and swinging trap chambers and discharge assistants.

139 This subclass is indented under subclass 138. Dispensers having a common axis for the discharge assistants.

140 This subclass is indented under subclass 139. Dispensers in which the axis is substantially vertical.

141 This subclass is indented under subclass 140. Dispensers having the portions of the discharge assistant forming the discharge paths for the materials lying in substantially the same plane.

142 This subclass is indented under subclass 138. Dispensers having the axes of the discharge assistants parallel.

142.1 This subclass is indented under subclass 129. Dispensers in which the plural supply compartments are adapted to be supported together in the hand and shaken to cause material to move through an outlet.

(1) Note. See class definition, Lines Wtih Other Classes and Within This Class, Hand Manipulable Shakers.

142.2 This subclass is indented under subclass 142.1. Dispensers in which the position of the plural supply compartments relative to one another or relative to a casing which supports and/or partially encloses both compartments must be altered in order to dispense from one of the compartments.

SEE OR SEARCH THIS CLASS, SUBCLASS:

144, for rotatably mounted assemblies of dispensing compartments, not of the hand shaker type.

160+, for single supply containers movable supported with reference to a base or casing.

142.3 This subclass is indented under subclass 142.1. Dispensers in which the supply compartments are containers mounted upon a common base or within a common casing from which they all may be separated either together as a unit or individually.

(1) Note. This subclass does not include dispensers having plural containers in which one container supports another separably but there is no base or casing from which both are removable. The inner container in the subject matter of subclass 142.5, for example, is frequently supported by and separable from the outer coaxial container.

(2) Note. Each of the containers continues to be a container after removal from the common base or casing, i.e., each still has a bottom and sidewalls.

SEE OR SEARCH THIS CLASS, SUBCLASS:

142.5, see (1) Note.

179.5, for single dispensers separable from base or casing for use.

142.4 This subclass is indented under subclass 142.1. Dispensers in which the outlets of the supply compartments are in such position relative to one another or the internal structure of the compartments is such that the outlet from which material is dispensed is determined by orienting the container assembly relative to the direction of fall of the material to be dispensed from the selected container.

(1) Note. Closures for the individual outlets may be provided, but they are not essential to the restriction of flow from the unselected source.

142.5 This subclass is indented under subclass 142.1. Dispensers in which plural containers or supply compartments are arranged one within the other about a common axis so that one container surrounds the other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

142.2, for this subject matter where the containers are movable relative to one another for selecting the source of material to be dispensed.

142.6 This subclass is indented under subclass 142.1. Dispensers in which opening movement of the outlet element of one compartment causes or insures closing of the outlet of the other compartment, either because there is a single closure, including plural closures rigidly connected, for the plural outlets or because relatively movable closures are interconnected to operate selectively.

SEE OR SEARCH THIS CLASS, SUBCLASS:

144.5, for similar organizations in nonshaker type dispensers.

142.7 This subclass is indented under subclass 142.6. Dispensers in which the plural compartments have closures movable relatively to one another and a single element, which is usually an actuator or a biasing means (or both), operably connected to both closures.

142.8 This subclass is indented under subclass 142.6. Dispensers in which a unitary or integrally connected closure member is movable as a whole in a straight line across the outlets of the several compartments.

SEE OR SEARCH THIS CLASS, SUBCLASS:

559+, for reciprocating flow controllers or closures for single chamber dispensers.

142.9 This subclass is indented under subclass 142.6. Dispensers in which a unitary or integrally connected closure member is movable in rotation about an axis extending in the direction toward which the outlets of the several compartments open.

SEE OR SEARCH THIS CLASS, SUBCLASS:

142.5, for this subject matter where the several compartments are coaxial or concentrically arranged.

548, for rotary discharge controllers or closures for single chamber dispensers.

143 This subclass is indented under subclass 129. Dispensers having features of construction specially designed to permit of either stacking the receptacles one on another or placing plural receptacles alongside one another in the minimum of space.

SEE OR SEARCH THIS CLASS, SUBCLASS:

173, for single dispensers with jackets.

SEE OR SEARCH CLASS:

206, Special Receptacle or Package, subclasses 499 through 520 for container nesting and stacking means.

144 This subclass is indented under subclass 129. Dispensers in which the plural receptacles or compartments are mounted to rotate as an assembly.

SEE OR SEARCH THIS CLASS, SUBCLASS:

167+, and see the notes thereto for rotatably mounted single sources.

SEE OR SEARCH CLASS:

34, Drying and Gas or Vapor Contact With Solids, subclass 109 for compartmented or pocketed rotary devices and subclasses 127+ for combinations of two or more rotary drums or receptacles.

211, Supports: Racks, subclass 77 and 78 for rotatable receptacle support racks.

221, Article Dispensing, subclass 113 and 119+ for plural source article dispensing devices in which the plural sources are rotatably mounted.

144.5 This subclass is indented under subclass 129. Dispensers having means common to a plurality of the sources, compartments, or containers, to dispense selectively from one or more of said sources, compartments or containers.

SEE OR SEARCH THIS CLASS, SUBCLASS:

133, for similar selecting means combined with structure for delivering a measured quantity from one of the sources of material, and an indeterminate quantity from another, or selectively from one of the sources.

142.6, for this subject matter where the plural chambers are of the hand manipulable shaker type.

145.1 With common discharge:

This subclass is indented under subclass 129. Subject matter wherein the plural sources, compartments or containers each have an individual feed path for feeding materials from the sources, compartments or containers and wherein the individual feed paths empty into a common feed path leading to a common outlet.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 602+ for a distribution system having plural inlets and a single outlet.

221, Article Dispensing, subclass 133 for an article dispenser having plural sources, stacks or compartments for the article to be dispensed and a common egress outlet for all of such sources, stacks or compartments.

145.2 Including discharge path cleaning:

This subclass is indented under subclass 145.1. Subject matter including means which operates to clean parts of the common path.

SEE OR SEARCH THIS CLASS, SUBCLASS:

148+, for cleaning of the dispenser.

145.3 Dispensed product retains identity of individual material (e.g., striped toothpaste):

This subclass is indented under subclass 145.1. Subject matter wherein individual materials from the sources are recognizable in the product dispensed.

145.4 Movable material discharge guide:

This subclass is indented under subclass 145.1. Subject matter wherein there is associated with the common outlet a material discharge guide, so constructed as to be movable relative to a part to which the guide is attached for the purposes other than mere attachment or detachment.

SEE OR SEARCH THIS CLASS, SUBCLASS:

74+, for a hose or other movable discharge guide interlocks and interconnections.

160+, where the dispensing container is mounted for motion.

257+, for combinations of a follower and a casing enclosed impeller, at least one of them being interconnected with a movable nozzle.

320+, for a movable nozzle interconnected with a single discharge assistant.

461, for a funnel type outlet movably interconnected with a container.

507, for annular, outlet surrounding discharge guides which are movable relative to and constitute an actuator for a second movable outlet element.

522+, for an axially slidable tube, sleeve, or apertured cap.

526+, for a movable material discharge guide.

567+, for a nozzle, spout and pouring device having separable means for mere attachment and detachment purposes.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 615+ for an articulated or swinging flow conduit in distribution system.

251, Valves and Valve Actuation, subclasses 149+, 150, 341+, and 349+ for other moving flow pipe section and spout.

291, Track Sanders, subclass 31 for a flexible or movable pipe operable to cutoff sand feed.

145.5 Having mixing chamber:

This subclass is indented under subclass 145.1. Subject matter wherein the common feed path includes a space in which the materials from the individual feed paths are blended.

145.6 Including mixing means:

This subclass is indented under subclass 145.5. Subject matter comprising a structure located in the space to aid in blending of the materials.

SEE OR SEARCH THIS CLASS, SUBCLASS:

459, for stationary agitator.

SEE OR SEARCH CLASS:

366, Agitating, for agitating or mixing, in general, and see the line between Classes 222 and 366 as set forth in Lines With Other Classes and Within This Class, in the class definition of Class 366.

145.7 Having variable flow control:

This subclass is indented under subclass 145.1. Subject matter comprising means for adjustably regulating a material flow in (a) at least one of the individual feed paths or (b) the common feed path.

(1) Note. Check valves or mere outlet closures or valves are not included in this subclass.

145.8 For common path:

This subclass is indented under subclass 145.7. Subject matter wherein the flow regulating means is located in the common feed path.

146.1 WITH HEAT OR COOLING MEANS:

This subclass is indented under the class definition. Dispensers having means for raising or lowering the temperature of material dispensed above or below ambient temperature.

SEE OR SEARCH CLASS:

62, Refrigeration, for the combination of a nominally claimed Class 222 disperser, e.g., a dispensing means, with a cooling means; a Class 222 dispenser specifi-cally claimed in combination with a specifically claimed cooling means is classified in Class 222.

219, Electric Heating, for the combination of a nominally claimed Class 222 dispenser, e.g., a dispensing means, with an electrical heating means; a Class 222 dispenser specifically claimed in combination with a specifically claimed electrical heating means is classified in Class 222.

146.2 Heating only:

This subclass is indented under subclass 146.1. Dispensers having only means for raising the temperature of the material dispensed above ambient temperature.

146.3 Having an aerosol:

This subclass is indented under subclass 146.2. Dispensers which include an aerosol, e.i., a device in which the material dispensed is caused to be discharged from a container by a fluid under pressure that directly contacts the material dispensed.

146.4 By steam:

This subclass is indented under subclass 146.2. Dispensers wherein the temperature of the material dispensed is raised by a vapor which has been created by raising the temperature of water above it boiling point.

146.5 By electrical energy:

This subclass is indented under subclass 146.2. Dispenser wherein the temperature of the material dispensed is raised by electrical current.

146.6 Cooling only:

This subclass is indented under subclass 146.1. Dispenser having only means for lowering the temperature of the material dispensed below ambient temperature.

147 This subclass is indented under the class definition. Dispensers having means to prevent or render difficult the introduction of material into the dispenser.

SEE OR SEARCH THIS CLASS, SUBCLASS:

80+, particularly, subclasses 80, 85+, and 87 for structures which cut or punch a container for the purpose of refill preventing.

476, and subclasses following the same, for mere valve, flow controller or closure structure for the dispensing outlet. Refill preventing means requires more than such structure.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 346+ and 348+ for receivers which have features of structure to prevent filling except by use of a dispenser having special cooperative features.

215, Bottles and Jars, subclasses 14+ for other devices having this combination.

148 This subclass is indented under the class definition. Dispensers having (1) devices which operate to clean parts of the apparatus other than or in addition to the material storage chamber or discharge paths, and (2) devices which operate to clean the storage chamber or discharge path and which are capable of functioning only when dispensing is not taking place or which do not assist with a dispensing operation.

(1) Note. This and the indented subclasses do not take devices which assist normal discharge (such as agitators and other discharge assistants) nor devices which remove material from such discharge assistants, nor does it take mere openings (with or without closures therefor) which provide access to the interior for cleaning or other purposes, such subject matter being provided for in the following subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

196.3, for hand manipulable shaker type dispensers having inertia operated movable means promoting dispensing by jarring or impact and also comprising elements adapted to clear the openings of a sifter or plural opening pattern dispensing outlet.

216+, for ejectors for the material in either (1) conveyor type discharge assistants with trap chambers or grooves, and (2) movable trap chambers.

226+, for discharge assistants having agitator type discharge assistants preceding them in acting on the material, and frequently having a wall cleaning function.

252+, for other plural sequentially operable discharge assistants, the second of which may be a cleaner type of agitator.

342, for scrapers or wipers for or carried by a discharge assistant.

345+, for strikers or clearers for conveyor type trap chambers.

478+, for dispensers having openings other than and in addition to dispensing outlets, including openings for access to the interior for cleaning or other purposes, there being no cleaning means claimed.

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning.

34, Drying and Gas or Vapor Contact With Solids, subclass 85.

68, Textiles: Fluid Treating Apparatus.

134, Cleaning and Liquid Contact With Solids, and see the notes thereto for cleaning in general.

137, Fluid Handling, subclasses 237+ for fluid handling systems having installed cleaning means.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclass 89 and 92 for receiver inlet cleaners in a dispensing and receiving combination.

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 106+ for spray nozzles combined with cleaning or flushing means therefor.

291, Track Sanders, subclass 12 and 42+ for blast nozzle and sand-delivery pipe cleaners.

431, Combustion, subclasses 121+ for a burner having a purging or cleaning means.

149 This subclass is indented under subclass 148. Dispensers having means constructed to pass through the dispenser outlet passage to clean the same.

SEE OR SEARCH THIS CLASS, SUBCLASS:

322, for dispensers having discharge assistant with an actuator (for a movable dispenser element) projecting through the dispenser outlet.

501, for valve or closure elements, capable of stopping flow through the dispenser outlet and leaving an actuator projecting through an outlet. If there is no element capable of stopping flow, the device is in subclasses 149+.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 244+ for cleaning means in which a mechanical member passes through a flow passage.
239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 114+ for cleaners which pass through the nozzle outlet to clean same, and subclasses 569+ for nozzles having restrictors combined therewith, some of which pass through and clean the nozzle outlet.

150 This subclass is indented under subclass 149. Dispensers in which the receptacle is of the resilient wall type and in which mechanism or connections between the cleaner and a wall causes motion of the cleaner on deflection of the wall.

SEE OR SEARCH THIS CLASS, SUBCLASS:
206+, for resilient wall type receptacles, particularly subclass 213 for wall actuated valves or closures. If the valve or closure or its actuator extends through and protrudes beyond the nozzle outlet, it is in subclass 150, even though the cleaning function is not alleged.

151 This subclass is indented under subclass 149. Dispensers in which the cleaning element is caused to pass from the exterior inwardly through the outlet to perform its cleaning function.

152 This subclass is indented under the class definition. Dispensers having either or both (1) means to jacket a material conveying conduit, or (2) means to provide a nonmaterial discharging inert atmosphere for the material to be dispensed, including means to evacuate gases from the container.

(1) Note. The inert atmosphere may be provided by means to conserve the gases in the container by bells with seals or by storage containers, or by otherwise preventing free exhaust of such gases during refilling.

(2) Note. The inert atmosphere may be chemically inert, i.e., not reactive chemically with the material to be dispensed, or it may be one which is not combustible with the vapors given off by the material.

SEE OR SEARCH THIS CLASS, SUBCLASS:
53, for such devices combined with automatic control and see the notes thereto.
190, for means to humidify or remove moisture from the dispenser atmosphere.
195, 209, 258, 261-263, 334, 373, 389, 394+, and 630+, for fluid flow discharge, gas agitation, or fluid pressure mediums causing discharge by acting on pumps, followers, etc., or by acting directly on material even though the fluids used for such purposes are inert to the material being dispensed.

153.01 WITH LOCK OR FASTENING SEAL:
This subclass is indented under the class definition. Subject matter including a device to secure the dispenser for impeding (a) an unauthorized use of the dispenser or (b) disassembly of parts of the dispenser from each other or (c) actuation or deactuation of a discharge assistant, flow controller or closure.

SEE OR SEARCH THIS CLASS, SUBCLASS:
147, for a refill preventing means

SEE OR SEARCH CLASS:
70, Locks, for locks, per se.
137, Fluid Handling, subclasses 383+ for a fluid handling system with lock or seal.
221, Article Dispensing, subclass 154 for an article dispenser having a lock, latch, or seal means for the supply container or its support.
292, Closure Fasteners, subclasses 307+ for a seal.

153.02 Plural:
This subclass is indented under subclass 153.01. Subject matter including two or more securing devices.

153.03 Lock actuated by key or tool:
This subclass is indented under subclass 153.01. Subject matter wherein the lock is operated by use of a key or some other hand manipulated instrument.

153.04 Lock operation dependent upon dispenser position:
This subclass is indented under subclass 153.01. Subject matter wherein the securing device impedes an operation of the dispenser unless the dispenser is moved to a predetermined orientation.

153.05 Single-use fastening seal:
This subclass is indented under subclass 153.01. Subject matter wherein the fastening seal includes an element associated with the dispenser for (a) retaining the dispenser or the dispenser closure in a closed position or (b) indicating to a subsequent user that the dispenser or the dispenser closure has been previously opened or manipulated.

SEE OR SEARCH THIS CLASS, SUBCLASS:
147, for a refill preventing means.

SEE OR SEARCH CLASS:
70, Locks, subclass 50 for padlock with seal.
137, Fluid Handling, subclasses 383+ for a fluid handling system with lock or seal.
221, Article Dispensing, subclass 154 for an article dispenser having lock, latch, or seal means for the supply container or its support.
292, Closure Fasteners, subclasses 307+ and 327 for a seal.

153.06 Frangible:
This subclass is indented under subclass 153.05. Subject matter wherein the seal element is easily broken to gain access to the dispenser.

153.07 Pull tab:
This subclass is indented under subclass 153.06. Subject matter wherein a tab or similar projecting device is associated with the seal element to be grasped by a user for breaking the seal element.

153.08 Cord:
This subclass is indented under subclass 153.05. Subject matter wherein the seal element is an elongated string-like member.

(1) Note. The string-like member may be made of metal or non-metal material.

153.09 Inhibiting disassembly:
This subclass is indented under subclass 153.01. Subject matter wherein the securing device operates to impede the separation of the parts of the dispenser from each other.

153.1 Overcap:
This subclass is indented under subclass 153.09. Subject matter wherein the securing device is associated with a secondary closure covering a primary flow controller or closure member of the dispenser to impede access to the dispenser.

153.11 For a fluid pressure discharge assistant:
This subclass is indented under subclass 153.01. Subject matter wherein the securing device is associated with a dispenser of the type utilizing a gas or liquid under pressure which directly contacts the material to be dispensed to cause a discharge.

(1) Note. A discharge assistant is defined in Lines With Other Classes and Within This Class, Discharge Assistants (e.g., Impellers, Pumps, Conveyors, Movable Trap Chambers, Etc., in the main class definition.

SEE OR SEARCH THIS CLASS, SUBCLASS:
153.13, for a lock to inhibit actuation of the discharge assistant which is not of the fluid pressure type.
394+, for a fluid pressure discharge assistant.

402.11, for an aerosol type dispenser having means for rendering the valve actuator inoperable.

153.12 Maintain dispenser in open position:
This subclass is indented under subclass 153.11. Subject matter wherein the securing device maintains the dispenser in a dispensing mode.

SEE OR SEARCH THIS CLASS, SUBCLASS:
402.14, for an aerosol type dispenser (i.e., the dispenser where a valve is actuated by a nozzle or through a valve outlet) with means to hold the valve open.

153.13 Inhibiting actuation of discharge assistant:
This subclass is indented under subclass 153.01. Subject matter wherein the securing device impedes the actuation of the discharge assistant.

SEE OR SEARCH THIS CLASS, SUBCLASS:
153.11, for a dispenser with a fluid pressure discharge assistant in combination with a locking device.
384, for a dispenser including piston holding means to prevent motion of the piston of a pump or pulsator.

153.14 Inhibiting operation of flow controller or closure:
This subclass is indented under subclass 153.01. Subject matter wherein the securing device impedes the opening or closing of the flow controller or closure of the dispenser for regulating the flow of the material through the discharge outlet.

SEE OR SEARCH THIS CLASS, SUBCLASS:
153.1, for an overcap with lock denying access to a valve outlet or flow controller.
153.11, for a dispenser with a fluid pressure discharge assistant in combination with a locking device.

154 This subclass is indented under the class definition. Dispensers having means for permitting inspection of the contents or a part thereof.

(1) Note. Included for example are transparent graduated receptacles, receptacles, having transparent sight openings, transparent inserts in discharge passages, etc.

(2) Note. Mere transparent receptacles, mere filling and/or dispensing openings with or without their closures or valves are not considered inspection devices and occur in appropriate subclasses below.

(3) Note. The container may be either the supply container or a trap.

SEE OR SEARCH THIS CLASS, SUBCLASS:
23+, for such subject matter combined with pointers, indicators, exhibitors, etc.
205, 215, 420, and 458, for example, for dispensers having mere transparent walls.

SEE OR SEARCH CLASS:
73, Measuring and Testing, subclasses 323+ for liquid level or depth sight glasses and subclasses 426+ for measuring vessels having no dispensing features but which are provided with inspection means.
116, Signals and Indicators, subclasses 264+ for fluid flow sight devices.
137, Fluid Handling, subclass 559 for inspection means for fluid handling systems.
184, Lubrication, subclasses 96+ for sight feeds.
217, Wooden Receptacles, subclasses 9 through 11 , 58 and 63, for those having display features.
221, Article Dispensing, subclass 155 for article dispensing devices having transparent inspecting or viewing means.

155 This subclass is indented under subclass 154. Dispensers having gauge tubes mounted exteriorly of the container to show the material level within the container.

156 This subclass is indented under subclass 154. Dispensers in which a portion of the container is transparent and is so placed that the level or condition of the material may be seen.

157 This subclass is indented under subclass 156. Dispensers in which the sight opening is of such an extent and so marked that the level of the contents may be determined by comparison with the marks.

158 This subclass is indented under subclass 154. Dispensers in which the entire container or its side walls are transparent and provided with graduations forming a scale for measuring the contents. The graduations may be placed on a separate member either inside or outside of the container.

159 This subclass is indented under subclass 154. Dispensers in which pipes or conduits are provided with transparent sections so that the fact of flow or the presence of material may be determined.

SEE OR SEARCH THIS CLASS, SUBCLASS:

40, for transparent flow line sections having an indicator moved by flowing material or for moving indicators exterior to the flow line section.

SEE OR SEARCH CLASS:

116, Signals and Indicators, subclasses 264+.
184, Lubrication, subclasses 96+.
406, Conveyors: Fluid Current, subclass 36.
431, Combustion, subclass 13 for a burner having a transparent viewing area.

160 This subclass is indented under the class definition. Dispensers in which at least the dispensing supply container is mounted for motion relative to its support or casing for some purpose other than mere attachment or detachment.

(1) Note. Where a discharge assistant is connected to the supply container for motion relative thereto, the supply container not being mounted for motion, the patent is in subclasses 173+, if means for immovable support is claimed, and in the appropriate following discharge assistant subclasses where no support means for the supply container is claimed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

173, see note 1.
176+, where the supply container is mounted on a vehicle but has no motion relative to the vehicle chassis.
216+, for agitator-conveyor type discharge assistant or agitator-movable trap chamber combinations.
282+, for discharge assistants with volume varying means.
344+, for conveyor type or movable trap chambers, including barometric or angle of repose (355) and dipping (358+).
437, and 457, for other barometric and angle of repose traps in various combinations.
463, for rockable or weighted dispensing containers.

SEE OR SEARCH CLASS:

4, Baths, Closets, Sinks, and Spittoons, particularly subclasses 365, 592+, 627, and 644.
109, Safes, Bank Protection, or a Related Device, subclasses 45+, for movably mounted safes.
137, Fluid Handling, subclass 581 for fluid handling systems involving a movable tank.
164, Metal Founding, subclasses 335+ for ladle or crucible type melt receptacle associated with molten metal shaping apparatus.
209, Classifying, Separating, and Assorting Solids, which has many subclasses on movably mounted receptacle type devices.
211, Supports: Racks, subclasses 71+ for movably mounted receptacle support racks.
221, Article Dispensing, subclasses 186+ for article dispensing devices in which the supply container is movably mounted for dispensing.
248, Supports, subclasses 128+ for movable receptacle stands; and subclass 202.1 for swinging receptacle brackets.

298, Land Vehicles: Dumping, appropriate subclasses.

366, Agitating, for a movably mounted mixing chamber, particularly subclasses 53+ and 219+.

414, Material or Article Handling, appropriate subclasses for a receptacle or other load holder which may move relative to its support for receiving or releasing a load.

161 This subclass is indented under subclass 160. Dispensers in which the movement of the dispensing container is of relatively small amplitude, for the purpose of shaking the contents.

SEE OR SEARCH THIS CLASS, SUBCLASS:

196+, for supply containers not movably mounted and flexible walled containers, designed to be jarred or have the walls vibrated for the same purpose.

SEE OR SEARCH CLASS:

184, Lubrication, subclass 69 for vibrator cut-offs for gravity feed lubricators.

209, Classifying, Separating, and Assorting Solids, appropriate subclasses, particularly subclasses 195+ and 446+.

221, Article Dispensing, subclasses 200+ for article dispensers having means to agitate, vibrate or jar the articles in the supply container, and see also appropriate subclasses indented under subclasses 156+ and 175+ for orienting and stack forming article dispensers, most of which involve agitation of articles in the supply container.

460, Crop Threshing or Separating, subclass 96 for vibrators for grain separator straw carriers.

162 This subclass is indented under subclass 160. Dispensers in which the supply container is mounted to move relatively to a trap chamber, impeller, or valve element so that its movement causes a dispensing operation.

163 This subclass is indented under subclass 160. Dispensers in which the container is adjustable relatively to some discharge assistant either to select one of several of different capacities or to vary the size of the outlet or the material surface exposed to the discharge assistant.

SEE OR SEARCH THIS CLASS, SUBCLASS:

285, for dispensers in which an element carried by the supply container and a discharge assistant are relatively movable to vary the discharge volume, but the supply container is not movably mounted.

164 This subclass is indented under subclass 160. Dispensers having a tiltably mounted container, i.e., mounted for a back and forth motion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

463, for weighted dispensers and those in which the receptacle configuration permits rocking or tilting.

577, for an inkstand including an inkwell tiltable on a base.

SEE OR SEARCH CLASS:

48, Gas: Heating and Illuminating, subclass 18 for tilting water feeders for acetylene generators.

105, Railway Rolling Stock, subclasses 261.1+ for dumping car body involving tilting thereof.

126, Stoves and Furnaces, subclass 349 for a tilting kettle furnace-type liquid heater.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 231+ for portable systems or track mounted supply means, and subclass 284 for combinations including movably mounted supply means.

164, Metal Founding, subclasses 335+ for ladle or crucible type melt receptacles associated with molten metal shaping apparatus.

177, Weighing Scales, subclass 115 for a weigh chamber that discharges by tilting.

209, Classifying, Separating, and Assorting Solids, subclass 260 for sifters involving tilting discharge.

221, Article Dispensing, subclasses 188+ for article dispensers in which the

supply container is mounted for angular back and forth movement about a fixed axis.

248, Supports, subclasses 133+ for stands for tilting receptacles.

291, Track Sanders, subclass 30, for oscillatory hopper sand feeders.

294, Handling: Hand and Hoist-Line Implements, subclasses 68.26+ for tilting hoisting-bucket type.

298, Land Vehicles: Dumping, subclasses 7, 9, 11, 12+, and 47 for a vehicle having a body mounted for tilting movement (i.e., dumping vehicle) and a dispensing feature.

165 This subclass is indented under subclass 164. Dispensers in which the container is tilted for refilling with fluent material or for removal and insertion of cartridge containing material to be dispensed.

(1) Note. See the search notes to subclass 164.

SEE OR SEARCH THIS CLASS, SUBCLASS:

325+, for other removable cartridges.

SEE OR SEARCH CLASS:

224, Package and Article Carriers, subclass 199, for cartridge carriers having tilting pockets.

166 This subclass is indented under subclass 164. Dispensers having a container that is tilted for dispensing by the force of gravity alone.

(1) Note. See the search notes to subclass 164.

SEE OR SEARCH CLASS:

366, Agitating, subclasses 36 and 39 for tilting skip feeders for mortar mixers.

167 This subclass is indented under subclass 160. Dispensers in which the container rotates about an axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

144, for plural sources, compartments or containers so mounted.

SEE OR SEARCH CLASS:

34, Drying and Gas or Vapor Contact With Solids, subclasses 108+ for rotary drums or containers.

111, Planting, subclasses 74 and 90+ for combinations with revolving hoppers.

165, Heat Exchange, subclass 88 for a heat exchanger comprising a rotary chamber.

177, Weighing Scales, subclasses 83+ for weigh chambers that rotate to discharge.

209, Classifying, Separating, and Assorting Solids, particularly subclasses 198+ for rotating receptacle amalgamators, subclasses 270, 284 through 306 for drum sifters, many mounted for rotation and subclasses 451 through 453 for rotating container stratifiers.

224, Package and Article Carriers, subclass 196, for body or belt attached, revolving cartridge carriers.

248, Supports, subclasses 130 and 131, for stands supporting rotating containers.

266, Metallurgical Apparatus, subclasses 243+, for rotary converters.

298, Land Vehicles: Dumping, particularly subclass 9 and 10 for those having rotating motion.

366, Agitating, particularly subclasses 45+ and 185 for a mixing chamber which is tilted for discharge.

168 This subclass is indented under subclass 167. Dispensers in which the axis of rotation is vertical or substantially so.

168.5 This subclass is indented under subclass 168. Dispensers having a plurality of trap chambers which are positioned at the periphery of the apparatus and are arranged to discharge a measured quantity of contents material supplied by the supply container.

169 This subclass is indented under subclass 167. Dispensers in which the discharge passage or passages open through the periphery of the rotatable container.

170 This subclass is indented under subclass 169. Dispensers having trap chambers in the periphery of the container.

171 This subclass is indented under subclass 169. Dispensers having a sleeve or similar telescoping part acting as a discharge controller for the peripheral outlets.

SEE OR SEARCH THIS CLASS, SUBCLASS:

519+, for axially rotary and longitudinally slidable sleeve type outlet elements.

522+, for axially slidable sleeve-type outlet elements.

553, for axially rotary apertured sleeve type discharge controllers.

172 This subclass is indented under subclass 169. Dispensers in which the discharge outlet is an annular slot between separate parts of the rotary container.

173 This subclass is indented under the class definition. Dispensers having either (1) a casing enclosing the dispenser in whole or in part, or (2) means for supporting the dispenser.

(1) Note. The casing must be in addition to the wall structure of the material holding container.

(2) Note. The sidewalls of dispensing containers (in which the bottom wall is above the lower edge of the side walls) are considered supports; see subclass 184.

SEE OR SEARCH THIS CLASS, SUBCLASS:

74+, for hose or discharge guides having interlock supports.

80+, where there is a cutter or punch, particularly subclass 80 where a cutter or punch is provided to penetrate some element in order to support the dispenser therefrom.

100, for collapsible wall type receptacles with casing or support and see the Notes thereto.

129.1+, for cabinet housed drink mixing and dispensing apparatus.

143, for packing or stacking arrangements for plural dispensers.

160+, and see the Notes thereto for movably mounted supply containers.

184, see Notes 1 and 2.

191, for dispensers combined with tool or implement handles.

325+, for cartridges or containers separably supported on bases or in jackets connected with discharge assistants.

437, and 457, for supply container supports involved in barometric type trap organizations.

463, for rockable or weighted dispensing containers.

465.1+, and see the notes thereto for dispensers having handles for manipulating the dispenser.

577, for an inkstand; i.e., a dispensing inkwell and a supporting base therefor.

SEE OR SEARCH CLASS:

47, Plant Husbandry, subclasses 50+ particularly 53 for sap bucket supports.

104, Railways, subclasses 275+ for hose bridges.

109, Safes, Bank Protection, or a Related Device, subclasses 50+.

137, Fluid Handling, subclasses 125 and 267 for plural tank truck carried systems; subclass 236.1 for distribution systems involving geographic features; subclasses 343+ for fluid systems having casings, supports or protectors, or having static constructional installation features, especially subclasses 899+ for vehicle mounted systems; subclasses 357+ for systems installed in buildings; subclasses 363+ for systems installed in the ground; subclass 374 for those associated with furniture and house furnishings; and subclasses 377+ for guards and protectors for limited areas of the system, as outlets.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 364+ for a filling supply means supported on the receiver, and subclasses 369+ for dispensers having supporting means for independent receivers.

211, Supports: Racks, particularly subclasses 71+ for receptacle support type.

220, Receptacles, subclasses 3.3+, 3.9+, 476+, and 628+ for supports, subclasses 23.87+, 23.91, 560.1, 573.4+ or a container enclosed in another

container or casing and subclasses 23.9, 495.01+, 574.3, and 908.1+ for receptacles having liners.

221, Article Dispensing, subclasses 282+ for article dispensers having casing or support features.

232, Deposit and Collection Receptacles, subclass 39 for letter boxes with supports.

239, Fluid Sprinkling, Spraying, and Diffusing, appropriate subclasses especially subclasses 146+ for vehicular type supports for spray apparatus, subclasses 195+ for hose holders combined with spray apparatus, subclasses 200+ for fixed or ground installed supports for spray apparatus, and subclasses 273+ for spray apparatus connected to or supported from a device which, per se, is elsewhere classified.

242, Winding, Tensioning, or Guiding, subclasses 398+ for a reel carrier which may be adapted to support a hose reel.

248, Supports, for supports in general, particularly subclasses 75+ for hose and/or nozzle type, 94 for strainer or funnel type 95, 102, 108, 128, 146, 196, 311.1, and 318 for receptacle type.

174 This subclass is indented under subclass 173. Dispensers having a pole or other extension device connected thereto. These are for the most part for providing an arrangement so that the dispenser may deposit its contents at a place remote from the person operating the same. The pole may carry the entire dispenser or only an elongated discharge passage.

SEE OR SEARCH THIS CLASS, SUBCLASS:

191, for dispensers combined with tool or implement handles.

379, for material supply container and discharge assistant casing having a telescopic material discharge guide.

398, for containers with fluid pressure discharge assistants having a telescopic supply container or discharge guides.

465.1+, for handle and handgrips for dispensers.

523, for miscellaneous telescoping material discharge guides.

SEE OR SEARCH CLASS:

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 280+, 375 and 532 for spraying apparatus which is attached to a pole.

294, Handling: Hand and Hoist-Line Implements, subclasses 19.1+ for pole structures having handling implement terminals and see the notes to the definitions thereof for related devices.

175 This subclass is indented under subclass 173. Dispensers having means adapting the container to be supported on the body of the user, or having an actuator adapted to be operated by parts of the body other than the hand or foot.

SEE OR SEARCH THIS CLASS, SUBCLASS:

179, for containers with supports having foot operated means for actuating some part of the combinations.

465.1+, for dispensers with handles, there being no means for supporting on the body of the user.

SEE OR SEARCH CLASS:

220, Receptacles, subclasses 17.1+ for leg or lap supported milking pails.

221, Article Dispensing, subclass 185 for article dispensers having means especially adapting them to be carried and supported by the body.

227, Elongated-Member-Driving Apparatus, subclass 49 for body harness and see the notes to such subclass for other combinations involving body carried devices.

239, Fluid Sprinkling, Spraying, and Diffusing, subclass 652 for a scatterer comprising a container for nonfluid material and a manually moved tube; subclass 653 for a body supported device comprising a container for nonfluid material and a scattering or strewing means; subclass 686 for a device comprising a container for nonfluid material and a scattering or strewing means operated by a manual or pedal driving means; subclasses 152+ for a sprinkling or spraying device which is body or animal carried.

179 This subclass is indented under subclass 173. Dispensers having an actuator for the dispensing means adapted to be operated by the feet.

SEE OR SEARCH THIS CLASS, SUBCLASS:

186, for a foot piece or rest to hold the dispenser in place.

SEE OR SEARCH CLASS:

4, Baths, Closets, Sinks, and Spittoons, subclass 249, 272+ and 308.

49, Movable or Removable Closures, subclasses 263+ for a pedal or treadle actuated closure.

74, Machine Element or Mechanism, appropriate subclasses, particularly subclasses 473.16+, 478, 481, 512+, 539, 542, 560+, and 594.1+, for pedals and pedal actuated mechanisms in general.

84, Music, subclasses 72+, 353, 357+, and 366 for wind instruments with pedal control.

110, Furnaces, subclass 178 for pedal actuated furnace doors.

111, Planting, subclass 98 for foot plate controlled dibbles.

251, Valves and Valve Actuation, subclass 295 for pedal operated valves.

179.5 This subclass is indented under subclass 173. Dispensers in which the dispenser is separable from the casing or support and is removable from such casing or support for dispensing. The dispensing outlet may be closed by the base, making removal necessary for dispensing, or the relation between the dispenser and base may be such that removal is necessary for other reasons, as the size of the base or the lack of a firm connection between the base and dispenser.

SEE OR SEARCH THIS CLASS, SUBCLASS:

142.3, for plural supply containers of the hand manipulable shaker type which are bodily separable from their support or casing for various purposes, as use, refilling or mere assembly.

180 This subclass is indented under subclass 173. Dispensers in which bracket or suspension means are provided for supporting the dispenser.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 283 for article dispensers which are bracket or suspension supported.

248, Supports, subclasses 200+ and 317+ for brackets and suspended supports in general.

181.1 For bottom discharge:

This subclass is indented under subclass 180. Subject matter wherein the dispenser in a normally supported position will have a discharge through an outlet at or adjacent the lowermost portion of the dispenser.

SEE OR SEARCH THIS CLASS, SUBCLASS:

100, and 105, for a support for a collapsible wall-type dispenser.

160+, for a dispenser mounted for a motion relative to its support.

173+, for a dispenser with a casing or support.

185.1, for a dispenser mounted in a bottom discharge position on a horizontal surface.

181.2 Suspension supported:

This subclass is indented under subclass 181.1. Subject matter wherein the dispenser is supported by a suspension means.

181.3 Supported on vertical wall by container integral with wall or by a plate support means:

This subclass is indented under subclass 181.1. Subject matter wherein a support for the dispenser is located on a vertical surface.

182 This subclass is indented under subclass 173. Dispensers having a cover which may be moved to expose some or all of the actuating parts of the discharge means.

(1) Note. Included are covers soldered in place and broken away to expose the operating parts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

111, for this feature where there is also means to return drip, leakage, or waste to the main supply.

130, for spaced jackets surrounding the supply container.

183, for jacketed dispensers.

325+, where the cover is solely to permit insertion of a cartridge or container for material to be dispensed into a dispenser organization having a discharge assistant.

402.17, for fluid pressure discharge assistant dispensers having a container end cover with an opening through which discharging material passes and means by way of which a valve is actuated, such cover remaining in place during dispensing.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 377+ for guards and shields for portions of fluid handling systems, usually the outlet.

183 This subclass is indented under subclass 173. Dispensers having a jacket about the dispensing container.

(1) Note. The jacket may be of skeleton form.

SEE OR SEARCH THIS CLASS, SUBCLASS:

83.5, 86 and 88, for dispensers having a sleeve or rest for a container on which a cutter or punch operates.

131, for dispensing containers having spaced jackets, and see the notes thereto for related art.

182, for enclosing covers for actuating parts of discharging means, and see the notes thereto for related art.

210, 323+ and 465+, for dispenser handles and handgrips, including those fastened to the dispenser by an encircling band.

325+, for removable containers and cartridges enclosed in the casings or supports of discharge assistants.

457.5, for supply containers of the hand shaker type having a hood or shield which forms a discharge passage for material emitted from the container at a point within the shield, so that the dispensed material follows a generally U-shaped path.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 375 for jacketed fluid handling systems.

215, Bottles and Jars, subclass 12, for those having protective jackets.

220, Receptacles, subclasses 23.87+, 23.91, 560.1, 573.4+ or a container enclosed in another container or jacket.

221, Article Dispensing, subclass 286 for article dispensers having a casing or outer covering (jacket) which provides a nonmaterial holding intervening space between such casing or covering and a dispenser.

184 This subclass is indented under subclass 173. Dispensers in which the side walls of the dispensing container are extended below the bottom on which the material rests to form a supporting base.

SEE OR SEARCH THIS CLASS, SUBCLASS:

183, for jackets so formed.

SEE OR SEARCH CLASS:

220, Receptacles, particularly subclasses 605+ and 628+ for such structures in general.

185.1 For bottom discharge dispenser supported on horizontal surface:

This subclass is indented under subclass 173. Subject matter wherein the dispenser is supported on a horizontal surface and will have a discharge through an outlet at or adjacent the lowermost portion of the dispenser.

SEE OR SEARCH THIS CLASS, SUBCLASS:

181.1+, for other bottom discharge dispenser.

321.5, for an inlet trap in a material supply container having a discharge assistant casing.

328, for a material discharge guide on the container side of the outlet.
377, for an inlet trap in the supply container with a pump.

186 This subclass is indented under subclass 173. Dispensers having an element positioned to be engaged by the foot of the operator for holding the dispenser in place.

SEE OR SEARCH THIS CLASS, SUBCLASS:
179, for pedal controlled discharge means.

SEE OR SEARCH CLASS:
248, Supports, subclasses 361+ for hold-downs in general.

187 This subclass is indented under the class definition. Dispensers in which the discharge or dispensing feed is by means of a wick or absorbent material.

SEE OR SEARCH THIS CLASS, SUBCLASS:
189.06+, for filters of absorbent material.

SEE OR SEARCH CLASS:
118, Coating Apparatus, subclasses 264+ for static absorbent or porous applicators.
184, Lubrication, particularly subclasses 3.1+, 16, 64, and 102 for swab or absorbent applicators.
239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 34+ for slow diffusers utilizing wicks or other absorbent means.
384, Bearings, subclass 379 for capillary feed to a bearing surface and see search notes.
401, Coating Implements With Material Supply, subclasses 198+, wherein the implement includes a wick means to feed coating material from its reservoir to a tool which is porous and through which material passes to the work surface; and subclass 283, for such an implement wherein the tool is of the brush, broom or mop type.
427, Coating Processes, subclass 429 for coating processes utilizing a web, wick, or absorbent applicator.
431, Combustion, subclasses 298+ for a fuel burner in which the flame is fed by a wick.

188 This subclass is indented under the class definition. Dispensers having a fluid trap means to seal inlets or outlets.

(1) Note. The fluid traps, for the most part, are to prevent the vapors formed by volatile contents (such as gasoline) escaping through the dispensing and/or vent openings.

SEE OR SEARCH CLASS:
34, Drying and Gas or Vapor Contact With Solids subclass 242, for chamber seals, and see the notes thereto.
137, Fluid Handling, subclasses 247+ for liquid valves and liquid trap seals.
210, Liquid Purification or Separation, subclasses 163+ for catch basins or traps having grated inlet surface drains.
217, Wooden Receptacles, subclass 105, for valved barrel bungs with a liquid seal.
220, Receptacles, subclass 228 for closures with a liquid seal.
406, Conveyors: Fluid Current, appropriate subclasses for hydraulic conveyors.

189.01 WITH FLAME ARRESTER:
This subclass is indented under the class definition. Subject matter having a means associated with a venting or discharge passage for preventing a flame from passing through it.

SEE OR SEARCH THIS CLASS, SUBCLASS:
53, and 152, for maintaining an inert atmosphere in or around the dispenser.
187, for a wick or absorbent material feed.
188, for a fluid trap seal, some of which are disclosed for washing material passing therethrough.
190, for an absorbent material used for other characters of dispensed material treatment or conditioning.
195, for a gas filter for the gas used in agitating the material to be dispensed.

394+, for a filter for fluid pressure discharge assistant.

SEE OR SEARCH CLASS:
48, Gas: Heating and Illuminating, subclass 192 for a flame guard.
55, Gas Separation, subclasses 490+ for means securing or retaining a separating media.
137, Fluid Handling, subclass 140 and 544+ for fluid handling system having means for separating solid material from the fluid including screen, strainer and filter and subclasses 377+ for a foraminous guard for fluid handling system.
220, Receptacles, subclass 88.2 for a fire preventing screen.

189.02 WITH SIFTER:
This subclass is indented under the class definition. Subject matter wherein the dispenser includes a container for granular material consisting of large particles and small particles, and the container further includes a device having a plurality of openings smaller than the large particles and larger than the small particles, so that the small particles will pass through the device and the large particles will be retained, or the device disintegrates the large particles to permit the particles to pass through the openings.

SEE OR SEARCH THIS CLASS, SUBCLASS:
480, for a hand-manipulable shaker, having diverse-type openings.
565, for a sifter, sprinkler, or plural opening patterns.

SEE OR SEARCH CLASS:
99, Foods and Beverages, subclasses 521, 522, 528, 603+ and 605+ for a grain huller embodying sifter.
209, Classifying, Separating, and Assorting Solids, particularly subclasses 233+, for a sifter.
241, Solid Material Comminution or Disintegration, subclasses 49+, 69+, and 83+ for a sifter combined with or forming part of a comminuter.

189.03 Integral with container:
This subclass is indented under subclass 189.02. Subject matter wherein the sifter is permanently connected to the container.

189.04 Plural:
This subclass is indented under subclass 189.02. Subject matter including two or more sifters.

189.05 Including moving mechanism:
This subclass is indented under subclass 189.02. Subject matter including a device to move the sifter to assist in removing the material from the container.

SEE OR SEARCH THIS CLASS, SUBCLASS:
196+, for a jarring or vibrating means.
216+, for an agitator or ejector.
226+, for an agitator followed by discharge assistant or an interconnected discharge controller.

SEE OR SEARCH CLASS:
221, Article Dispensing, subclasses 224+ for plural discharge assistants combined with a manipulating means.

189.06 WITH FILTER (E.G., STRAINER):
This subclass is indented under the class definition. Subject matter wherein the dispenser includes a container for a liquid material and the container further includes a separating device having a plurality of openings for (a) retaining matter (e.g., solid or fluid) within a container when a fluid is removed from the container or (b) preventing matter (e.g., solid or fluid) from entering the container from surrounding atmosphere.

SEE OR SEARCH THIS CLASS, SUBCLASS:
187, for a wick or absorbent material feed.
188, for fluid-trap-seals, some of which are disclosed for washing material passing therethrough.
189.01, for a flame arrester.
189.02, for a sifter.
190, for a material treatment or conditioning means.
195, for a gas filter for the gas used in agitating the material to be dispensed.

394+, for filter for fluid discharge assistant.
480, for mere pattern or sifting type openings such as hand-manipulable shaker.

SEE OR SEARCH CLASS:
48, Gas: Heating and Illuminating, subclass 192 for a flame guard.
55, Gas Separation, subclasses 490+ for a means securing or retaining a separating media.
137, Fluid Handling, subclasses 140 and 544+ for a fluid handling system having means for separating solid material from the fluid including a screen, strainer, and filter and subclasses 377+ for a foraminous guard for fluid handling system.
209, Classifying, Separating, and Assorting Solids, particularly subclasses 233+ for a sifter for separating solid materials.
210, Liquid Purification or Separation, subclass 296 for a gravitational separator using liquid as a separating medium combined with a filter, subclasses 348+ for a filter, and subclasses 464+ for a portable receptacle of draining type.
220, Receptacles, subclasses 88.1+ for a fire prevention screen or flame arrester.
291, Track Sanders, subclass 13 and 48 for a screen combination.
312, Supports: Cabinet Structure, subclass 210.5 for a sifter combination.

189.07 Portable drainer:
This subclass is indented under subclass 189.06. Subject matter wherein (a) the liquid is in a hand-held container tiltable from an erect to a pouring position and (b) the filter is located relative to a pouring outlet so that the solid matter is retained in the container when the container is tilted.

189.08 Plural:
This subclass is indented under subclass 189.06. Subject matter including two or more filters.

189.09 Associated with vent passage:
This subclass is indented under subclass 189.06. Subject matter wherein the filter is associated with an air passage other than a dispensing passage.

189.1 Internally extended outlet pipe (e.g., diptube):
This subclass is indented under subclass 189.06. Subject matter wherein (a) the filter is located within a tube through which the fluid is dispensed and (b) the tube extends into the fluid within the container.

189.11 With discharge assistant:
This subclass is indented under subclass 189.06. Subject matter wherein the filter is associated with a discharge assistant.

(1) Note. A discharge assistant is defined in Lines With Other Classes and Within This Class, Discharge Assistants (e.g. Impellers, Pumps, Conveyors, Movable Trap Chambers, Etc.), in the main class definition.

190 This subclass is indented under the class definition. Dispensers having means to modify, preserve or otherwise treat the material dispensed.

(1) Note. These are disclosed for various purposes such as moisture regulating by draining, humidifying or absorbing moisture, ventilating, etc.

(2) Note. Other main classes appropriate to the type of treating or conditioning means must be searched.

SEE OR SEARCH THIS CLASS, SUBCLASS:
113, for burner combinations.
131, for dispensers having heat exchange jackets.
146, for dispensers having miscellaneous heating or cooling means.
152, for dispensers having inert atmosphere providing means.
160+, for movably mounted dispensers.
187, for wick or absorbent material feed.
188, for fluid-trap-seals.
189.01, 189.02+ and 189.06+, for filter or strainer combinations.

SEE OR SEARCH CLASS:

53, Package Making, subclasses 111+ for packaging apparatus combined with means to subject the contents material to an agency which alters a physical or chemical characteristic of the contents material.

221, Article Dispensing, subclasses 135+ for article dispensers having combined therewith means to modify, preserve or otherwise treat the articles dispensed.

312, Supports: Cabinet Structure, subclasses 31+ for gas or vapor treatment of material.

191 This subclass is indented under the class definition. Dispensers combined with the handles of tools or implements, either for support or for interconnection of the handles and dispenser actuators. The dispenser container may serve as, or be contained in, the tool or implement handle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

174, for dispensers mounted on pole or extension devices.

192, for dispensers combined with firearms.

465.1+, and see the notes thereto for dispensers having handles or handgrips.

SEE OR SEARCH CLASS:

16, Miscellaneous Hardware, subclasses 110.1+, especially subclass 111.1 for receptacles combined with handles, and see Note 3 to subclass 110, for handles for tools, implements and analogous devices.

30, Cutlery, subclass 125, for cutlery implements having salt and pepper shakers forming or contained in the handles.

401, Coating Implements With Material Supply, subclass 138 and 140, wherein the implement includes a supply reservoir mounted on an elongated handle, which reservoir feeds material directly to the work (subclass 138) or the work-engaging portion of the implement (subclass 140).

192 This subclass is indented under the class definition. Dispensers claimed in combination with features other than the container structure and discharge assistant means and not provided for in preceding subclasses.

(1) Note. Container structure includes handles and/or handgrips, the inlets and/or outlets and their check-valves, manually actuated valves, discharge controllers and/or closures and actuating devices for such parts.

(2) Note. Discharge assistants include all mechanism that moves or tends to move material toward or through a discharge outlet, fluid currents for the same purpose and actuating means therefor.

(3) Note. In this subclass, for example, are combinations with a firearm, bicycle, mirror, tools, or implements (cutters and punches are in subclasses 80+ and dispensers combined with tool or implement handles are in subclass 191), supports for additional articles, bumpers to absorb shock, protector rings, display or exhibiting means which do not display the material (subclasses 154+), display or exhibit a condition, or perform a measuring function (subclasses 23+), specific material to be dispensed, hand shields and sediment traps, or other material separating means (other than those in subclasses 188 and 189).

(4) Note. All preceding subclasses must be investigated for particular combinations within this definition and shown by the preceding subclass titles.

(5) Note. See the notes to the main class definition for combinations of dispensers with other devices located in other classes.

SEE OR SEARCH THIS CLASS, SUBCLASS:

23+, see note 3.

80, see note 3.

93, for collapsible wall type containers combined with additional article holding means.

106, for collapsible wall type containers combined with miscellaneous other type devices.
154+, see note 3.
188, 189, see note 3.
191, see note 3.
538+, and see the notes thereto, for means to house or secure discharge guides in a nonuse position.
564, and see the notes thereto for containers having interior material guides, including splash deflectors.

SEE OR SEARCH CLASS:
15, Brushing, Scrubbing, and General Cleaning, subclass 246, for bumpers attached to the implements of that class.
137, Fluid Handling, subclass 234.6 for a system having a fluid handling guide or support and a fluid supply means for it, and subclass 560 for miscellaneous fluid handling systems combined with nonfluid handling means.
211, Supports: Racks, subclasses 69.2+, for an inkwell combined with a penrack.
221, Article Dispensing, subclass 199 for combined article dispensing devices not elsewhere provided for.

195 This subclass is indented under the class definition. Dispensers having means to agitate the contents by gas; including, for example, gas pressure force feed arrangements in which the gas is discharged into the container contents below the surface thereof; also pump devices with means to disconnect the pump from the discharge and operate it to agitate contents; also means to discharge gas pressure exhaust into supply means for agitation.

SEE OR SEARCH THIS CLASS, SUBCLASS:
630+, for fluid flow discharge type dispensers.

SEE OR SEARCH CLASS:
68, Textiles: Fluid Treating Apparatus, subclass 183, for such apparatus where gas is supplied to a liquid.
209, Classifying, Separating, and Assorting Solids, subclass 295 and 321, for pneumatic agitation associated with sifting.
261, Gas and Liquid Contact Apparatus, particularly subclasses 121+ for the submerged blast type.
366, Agitating, subclasses 3+ and 10+ for mortar mixing chambers in which gas performs the agitating function, and subclasses 101+ for such gas type agitators of general utility.

196 This subclass is indented under the class definition. Dispensers having means either to jar the container and/or to cause some part of the container (including its outlet agitator or other discharge assistant adjacent its outlet) to vibrate, i.e., to move in reciprocations or oscillations of such small amplitude that the effect is to accelerate gravity flow rather than to move the material bodily toward or through the discharge outlet.

SEE OR SEARCH THIS CLASS, SUBCLASS:
161, for supply containers mounted for vibrating, i.e., small amplitude, motion as distinguished from having a wall or wall portion mounted for such motion relative to other walls or wall portions, causing a wall or wall portion to jar or vibrate due to its resilience or flexibility and/or have an agitator or other discharge assistant or trap chamber have small amplitude vibratory motion.
206+, for resilient wall dispensers designed for flexing the resilient wall to cause the dispensing operation, no jarring or vibrating means being provided.
226+, for agitators removed from the outlet and followed (in the direction of material flow) by other discharge assistants, even though the agitator has movements of small amplitude, unless the agitator and/or the following discharge assistant is the container wall or part thereof with means to cause small amplitude movement, for which see subclasses 196+
275, and 409, for agitators and other discharge assistants having reciprocating motions, not mere vibrations.

SEE OR SEARCH CLASS:

34, Drying and Gas or Vapor Contact With Solids, subclass 164 for those having treated material vibrating means.

164, Metal Founding, subclasses 203+ for sand mold forming apparatus employing a vibrating means for compacting the sand.

198, Conveyors: Power-Driven, subclass 533 for a chute or other gravity conveyor that is vibrated and subclasses 521, 594+, 609, and 752.1 for a vibratory conveyor.

209, Classifying, Separating, and Assorting Solids, appropriate subclasses, particularly the impact or jarring subclasses under sifters (330, 334, 336, 338, 340, 343, 345, 347, 349, and 381+).

221, Article Dispensing, subclasses 163+ for article dispensers including orienting and in which means to selectively separate properly oriented articles from a source of supply involves agitation of the articles in the source; subclasses 175+ for article dispensers having stack forming means, and in many of which agitating serves to assist discharge of articles from a hopper to a stacking outlet; and subclasses 200+ for article dispensers in general having means to shake or stir the supply container or the articles for agitating purposes.

366, Agitating, subclass 39 for skip feeds for mortar mixers having jarring or vibrating means.

196.1 This subclass is indented under subclass 196. Dispensers adapted to be supported in the hand and shaken to cause material to move through the outlet and having an inertia-operated movable part associated with the supply container for shifting movement when the container is shaken, whereby jarring results from the impact of the inertia operated member on the material or container and the material is loosened, shifted, dragged or impelled through the outlet.

(1) Note. See class definition, Lines With Other Classes and Within This Class, Hand Manipulable Shakers.

(2) Note. The movable element may be a discharge controller or closure, or a discharge assistant, the latter term including devices analogous to agitators or grinding bodies but not falling within the definitions of Classes 241 and 366. Mere motion of the material as a result of shaking is not considered a jarring element.

(3) Note. Since many manually movable elements are capable of shifting by inertia on movement of the dispenser, only those designed and constructed solely for this mode of operation and having no manual actuating means in connection with the movable element have been placed here.

(4) Note. Discharge assistants of the movable trap chamber type and stationary trap type dispensers have not been included, since the presence of the measuring function is inconsistent with the mode of operation characteristic of this group.

SEE OR SEARCH THIS CLASS, SUBCLASS:

251, for members mounted in a stationary supply container to move only when shifting of the material displaces them, the shifting of the material being caused by dispensing.

404, 415, for conveying type discharge assistants having manually operated actuators. See (2) Note.

454+, for tiltable containers having traps which may have inertia-operated valves. (See (4) Note).

476, for dispensers which have spaced discharge controllers alternately seated in a single outlet of a container which is not a hand manipulable shaker.

500, for gravity or inertia-operated outlet elements for dispensers other than hand manipulable shakers. See class definition, Lines With Other Classes

and Within This Class, Hand Manipuable Shakers.

SEE OR SEARCH CLASS:

241, Solid Material Comminution or Disintegration, subclasses 86+, for comminuting devices comprising a rotary comminuting element cooperating with a perforated stationary surface, and subclass 168, for hand support comminutors, characterized by positive manual operation of crushing mechanism or by a loose grinding body type of comminuting element. See (2) Note.

366, Agitating, subclasses 129+ for hand manipulable shaker type agitators. See (2) Note above, and see Class 366, class definition, Lines With Other Classes and Within This Class, in the class definition for the line.

196.2 This subclass is indented under subclass 196.1. Hand manipulable shakers in which the movable inertia-operated member is associated with the dispensing outlet, either forming or closing the outlet, or passing through it or approaching it so closely as to force or tend to force material through it.

SEE OR SEARCH THIS CLASS, SUBCLASS:

149+, for cleaning means passing through the dispenser outlet but not serving as either closure or discharge assistant.

196.3 This subclass is indented under subclass 196.2. Hand manipulable shakers in which the outlet is of the plural opening pattern type and an inertia-operated movable element or a part of such element passes through or moves into each opening of the pattern outlet.

SEE OR SEARCH THIS CLASS, SUBCLASS:

149+, for cleaning means extending through dispenser outlets.

501, for outlet element actuators projecting through dispenser discharge guides.

196.4 This subclass is indented under subclass 196.2. Hand manipulable shakers in which the inertia-operable member does not have enlarged portions on both sides of the dispensing outlet but is loosely confined in a guide or housing adjacent the outlet so that it is freely movable toward or away from the outlet either to loosen or shift the material by impact thereon or on the container or to open and close the outlet, or both.

(1) Note. This subclass includes balls inertia elements movable adjacent the dispensing outlet. See Class 241, Solid Material Comminution or Disintegration, subclasses 86+, for comminuting devices which have a stationary comminuting surface with openings which cooperate with a rotary comminuting element.

SEE OR SEARCH THIS CLASS, SUBCLASS:

500, for other caged outlet elements operated by gravity or inertia.

SEE OR SEARCH CLASS:

241, Solid Material Comminution or Disintegration, subclasses 86+, see (1) Note, and subclass 168, for hand supported comminutors for condiments in which the movable element is confined only by the walls of the supply container whereby lumps may be crushed between the movable element and the walls.

196.5 This subclass is indented under subclass 196.1. Hand manipulable shakers in which an inertia-operated movable element is mounted or formed for limited movement within the supply container so that its primary effect is to jar the dispenser, or loosen or shift the material by impact thereon, and any resultant crushing of the material between the movable element and the container walls is incidental, being prevented by the restrictions on the movement of the inertia-operated element.

SEE OR SEARCH CLASS:

241, Solid Material Comminution and Disintegration, subclass 168, for loose grinding body type hand supported comminutors.

197 This subclass is indented under subclass 196. Dispensers having vibrating means operating on or carried by a conveyor type or movable

trap chamber so as to jar or vibrate the trap to dislodge or settle its contents.

SEE OR SEARCH THIS CLASS, SUBCLASS:
216+, for agitators and ejectors for conveyor type or movable trap chambers.

198 This subclass is indented under subclass 196. Dispensers having a container with a single outlet, the container walls adjacent the outlet comprising or being covered by a plurality of vibrating members which bound or define the outlet.

SEE OR SEARCH THIS CLASS, SUBCLASS:
280, for outlets bounded by other discharge assistants.

199 This subclass is indented under subclass 196. Dispensers having a container with a movable bottom vibrating in substantially its own plane, or swinging toward and away from the outlet, which usually is located in a short arc, at one edge of the movable bottom.

SEE OR SEARCH CLASS:
241, Solid Material Comminution or Disintegration, subclass 249 for such devices acting as feeds for comminutors.

200 This subclass is indented under subclass 196. Dispensers having a vibrating member movable across the outlet or near it and in a plane transverse to the material flow.

201 This subclass is indented under subclass 196. Dispensers having a vibratable container wall or false wall and a rotary discharge assistant, the wall receiving its motion from the rotary assistant or a projection or cam carried thereby.

SEE OR SEARCH THIS CLASS, SUBCLASS:
231, for free engagement type connection between agitators and other discharge assistants or valves.

202 This subclass is indented under subclass 196. Dispensers in which a wall of the supply container body or a portion thereof is jarred or vibrated to cause flexure thereof.

(1) Note. Means for causing such jarring or vibration other than motion of the hand (hand shaking) of the entire container must be included. Means movable with respect to the container to jar or vibrate a wall when it is hand shaken are here.

(2) Note. Where the wall is mounted on pivots or is mounted for sliding motion, see the preceding subclasses.

203 This subclass is indented under subclass 202. Dispensers in which the container wall or part thereof which receives the force causing vibration, is constructed of flexible material in whole or in part.

(1) Note. In the patents in subclass 202 in which a wall receives a blow or force to impart vibrations, the wall is of rigid or resilient material which may flex slightly due to the blow or force. The patents in subclass 203 have the wall made of flexible material (as a fabric) or if made of rigid material for the most part involve at least some flexible material (as in the joint) to permit motion.

204 This subclass is indented under the class definition. Dispensers having (1) a siphon, i.e., a discharge conduit having an outlet below the material level and an intermediate portion at an elevation above the material level so that once flow is started it will continue, combined with (2) a discharge assistant.

(1) Note. Inlets for discharge assistants (for example pump inlets) even though called siphons which do not function as siphons independently of the discharge assistant are not here, but are in the appropriate following subclasses; see subclasses 251+ and the subclasses referred to in the notes to the definitions thereof.

SEE OR SEARCH THIS CLASS, SUBCLASS:
251, see (1) Note.
416, for miscellaneous dispensers with siphons.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 123+ for siphons, especially subclasses 130+ and 142+ for siphon starting means, and subclasses 132+ for periodic or level responsive siphons.

205 This subclass is indented under the class definition. Dispensers having both a supply and a trap chamber, and having feed means to cause feed from the supply to the trap other than gravity (including forming a vacuum in the trap to cause feed thereto), discharge from the trap being by gravity or by manual removal, i.e., by means not requiring a discharge assistant.

(1) Note. Where discharge assistant means are provided to assist in removing material from the trap chamber, see the appropriate following subclass, subclasses 251+ defining "discharge assistant" and see the notes to such subclasses for other such art.

SEE OR SEARCH THIS CLASS, SUBCLASS:

251, see (1) Note.

416, and 420 through 457, for other trap chamber combinations in which discharge from the trap is by gravity or manual removal.

576, and indented subclasses 577, 578+ and 583, for a dispensing inkwell including nongravity feed to a trap chamber which is a dip well.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclasses 191+ for article dispensing devices in which the articles are delivered to stationary article supports for manual removal, and subclasses 255+ for article dispensers in which dispensed articles are retained by discharge assistant means for manual removal therefrom.

206 This subclass is indented under the class definition. Dispensers having one or more walls or portions thereof which may be distorted or deflected by application of a force, to expel material which wall or walls return to their original position when the force is removed.

(1) Note. The wall return motion may be due to its own resilience or due to a spring or other biasing means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

92+, for collapsible wall containers.

150, for this subject matter with a cleaner for the dispenser outlet and see the reference to subclass 206 for the line.

202+, for dispensers with means to jar or otherwise cause a wall to vibrate.

490, for outlets in the form of slitted resilient diaphragms or nipples.

491+, where the resilient element, even though of wall form, is deflected by the pressure of the container contents to open the outlet.

SEE OR SEARCH CLASS:

92, Expansible Chamber Devices, subclasses 89+ for collapsible wall type expansible chamber devices.

221, Article Dispensing, subclass 64 for article dispensers having flexible supply container walls, and subclass 65 for such dispensers having collapsible or telescoping supply container wall structure.

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 650+ for a device comprising a container for nonfluid material and means to strew or scatter the material, and in which the container walls may be resilient or compressible.

401, Coating Implements With Material Supply, subclasses 183+, wherein the implement has a resilient-wall material container which is deformed by digital engagement to force the material either into or away from the container (to the applying tool).

417, Pumps, appropriate subclasses for collapsible wall pumps.

418, Rotary Expansible Chamber Devices, subclass 45 for a rotary expansible chamber device having a collapsible progressively deformed working chamber wall.

604, Surgery, subclass 185 and 212+ for bulb type syringes.

207 This subclass is indented under subclass 206. Dispensers in which there is (1) a supply container for material to be dispensed; and (2) a second chamber which receives material from the supply container and from which the material is delivered. The second chamber is usually a pump or pulsator and either or both the container and chamber has a resilient wall.

209 This subclass is indented under subclass 206. Dispensers in which either (1) a resilient wall type pump or pulsator generates fluid pressure for causing discharge of the material from the container, or (2) a removable flexible wall closure (that usually serves as a pump or pulsator) is provided.

SEE OR SEARCH THIS CLASS, SUBCLASS:

207+, in which a removable resilient wall forcing device receives material from a supply container.

394+, for other dispensers in which the material is caused to dispense by a fluid under pressure, and see the notes thereto.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 150 for collapsible bulb fluid pressure generating pumps for starting siphons.

210 This subclass is indented under subclass 206. Dispensers having a handle or handgrip connected to the dispenser container and by means of which the dispenser may be handled.

(1) Note. Where the handle or handgrip is connected only to a movable dispenser part to actuate the same, classification is with the type of element actuated, such actuating handles being in this subclass only when combined with a container handle or handgrip.

SEE OR SEARCH THIS CLASS, SUBCLASS:

323+, for other container handles or handgrips for dispensers with discharge assistants.

441, for trap chambers with cutoffs combined with container handles or handgrips.

465.1+, for miscellaneous dispenser-container handle and handgrip combinations.

211 This subclass is indented under subclass 206. Dispensers in which there is a pipe communicating with and constituting an extension of the dispensing outlet and extending internally of the receptacle. For the most part, these pipes extend to adjacent the receptacle bottom.

SEE OR SEARCH THIS CLASS, SUBCLASS:

214, for foraminous or apertured tubes within the receptacle constituting an element of the wall biasing means.

376, 377 and 382, for internally extending outlet pipes in combinations involving a supply container with an encased impeller, follower, or other discharge assistant.

464.1+, for miscellaneous dispensers with an internally extending outlet pipe.

212 This subclass is indented under subclass 206. Dispensers having flow controllers or closures for openings in the dispenser.

SEE OR SEARCH THIS CLASS, SUBCLASS:

149+, for cleaners extending through a dispenser outlet, and see the note to subclass 150 for the line.

476, through 563, for other types of dispensers having flow controllers and closures, and also closures and/or flow controllers for resilient wall containers where characteristics pertaining to the resilient wall features are not claimed.

213 This subclass is indented under subclass 212. Dispensers provided with mechanism or connections between the flow controller or closure and one or more of the resilient walls so that flexure thereof causes operation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

150, for cleaners so operated, the note under such subclass stating the line.

214 This subclass is indented under subclass 206. Dispensers having means to bias or deflect one or more walls either to (1) cause them to return to their normal position after having been forcibly distorted or deflected, or (2) to deflect the same to cause discharge.

SEE OR SEARCH CLASS:

401, Coating Implements With Material Supply, subclasses 156+ for hand-manipulable coating implement having a resilient-wall reservoir and means to deform the wall either to fill the reservoir or to force material therefrom to the applying tool.

215 This subclass is indented under subclass 206. Dispensers made of material at least part of which is not metallic.

SEE OR SEARCH THIS CLASS, SUBCLASS:

107, for corresponding collapsible wall receptacles.

209, for nonmetallic flexible wall pumps or pulsators, and nonmetallic, flexible wall, removable closures.

216 This subclass is indented under the class definition. Dispensers having means directed toward or moving in or through (1) the chambers or pockets of a conveyor type discharge assistant having trap chambers or transverse grooves, or (2) the material pocket of a movable trap chamber to stir or dislodge the contents thereof and acting at or near the discharge point.

SEE OR SEARCH THIS CLASS, SUBCLASS:

195, for gas agitation.

196+, where the agitation and/or ejection is due to jarring and/or vibrating means.

226+, and 251+, for agitators and/or ejectors in other combinations, subclass 342 having scrapers or wipers for or carried by a discharge assistant.

630+, for fluid flow discharge.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclass 463.1 for a conveyor having load engaging elements and means for ejecting the load from the elements, and subclass 705 for a bucket type conveyor having means for ejecting loads from its buckets.

221, Article Dispensing, subclasses 233+ for article dispensing devices having means for removing articles from movable segregating chamber structures.

406, Conveyors: Fluid Current, subclass 67 for rotary trap chamber discharge assistants feeding pneumatic conveyors, in which the fluid current clears the traps of material carried therein.

217 This subclass is indented under subclass 216. Dispensers having the agitator or ejector mounted on or in the conveyor or movable trap chamber and acting on or in the traps or grooves thereof.

218 This subclass is indented under subclass 217. Dispensers having a rotary conveyor or chamber with radial trap chambers and radially movable members therein, usually constituting movable bottoms for the trap chambers.

SEE OR SEARCH CLASS:

91, Motors: Expansible Chamber Type, subclasses 472+, for rotary cylinder pumps or motors with reciprocating pistons.

417, Pumps, subclasses 269+ and 462+, for rotary cylinder pumps with reciprocating pistons.

219 This subclass is indented under subclass 218. Dispensers having two diametrically opposite traps or a plurality of such trap pairs, each pair having a common ejector which moves alternately to the periphery of the rotor at opposite sides, ejecting at the trap that is in discharge position.

220 This subclass is indented under subclass 216. Dispensers having a conveyor with trap chambers or grooves and a rotary ejector having a projection, projections or a spiral flange meshing with the chambers or grooves at or near the discharge point to stir or dislodge material.

SEE OR SEARCH THIS CLASS, SUBCLASS:

342, for similar means for removing material from the discharge assistant at points other than the discharge point.

221 This subclass is indented under subclass 216. Dispensers having the agitator and/or ejector actuated by cam means.

222 This subclass is indented under subclass 216. Dispensers having an ejector so pivoted as to rest on the conveyor or movable trap chambers and enter the traps or grooves as they are presented successively at the discharge point.

223 This subclass is indented under subclass 222. Dispensers combined with an additional pivoted member which levels the charge in the trap or groove as it approaches the discharge point.

(1) Note. The two pivoted members are usually mounted in the same housing which serves as a cover for the outlet.

SEE OR SEARCH THIS CLASS, SUBCLASS:

350, for pivoted strikers not combined with ejectors.

224 This subclass is indented under subclass 216. Dispensers in which the ejector terminates in a ball or roller having roller contact with the conveyor or movable trap chambers and entering the traps or grooves in turn.

225 This subclass is indented under subclass 216. Dispensers having an ejector element of resilient material, the ejector being biased to enter the traps or grooves.

SEE OR SEARCH THIS CLASS, SUBCLASS:

206+, for resilient wall dispensers.

226 This subclass is indented under the class definition. Dispensers having means of the agitator type adapted to mix the material to be discharged and/or move it toward the discharge outlet and either, or both, (1) a discharge assistant acting on the material subsequently or (2) a subsequent cutoff interconnected with the agitator means for operation simultaneously therewith. The first of a series of discharge assistants is considered an agitator if it is not a follower, pump, or pulsator or a conveyor type or movable trap chamber.

(1) Note. Cut-offs or other discharge controllers or closures for dispenser outlets and also other movable dispenser outlet elements having actuating means which contact the material being discharged, but which actuating means have neither added features of structure for, nor particular relationships to cause, agitation are not in this nor the indented subclasses, but are in the appropriate following subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

251+, for agitator type discharge assistants not having a cut-off interconnected therewith and for discharge assistants other than agitators as above defined combined with cut-offs, see particularly subclasses 310+, 356, 357, 380, 387, and 400.

252+, for serially arranged discharge assistants where the first of the series is not an agitator as above defined.

505+, for movable outlet elements with relatively movable actuating means.

510, for movable outlet elements having a rod actuator passing through the dispenser container.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, appropriate subclasses for serially arranged conveyors, including 570+.

221, Article Dispensing, subclasses 200+ for article dispensers including means to agitate, vibrate or jar the articles in the supply container. See also subclasses 182, 183+ and 202+ for article dispensing combinations involving agitating means mounted on, incorporated in, or otherwise interrelated with discharge assistants for operation therewith.

366, Agitating, particularly subclasses 184+ for specified discharge means.

227 This subclass is indented under subclass 226. Dispensers having at least three discharge assistants or two discharge assistants and a discharge controller arranged for successive action on the material being discharged.

(1) Note. Sets of two or more elements having the same function are included as only a single assistant, as are other plural elements which act together as a single device, such as the plural vanes or blades of screws or propellers.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 201 for devices including at least three means for assisting the discharge of articles from the supply container, at least one of said means being an agitating, vibrating or jarring means.

228 This subclass is indented under subclass 226. Dispensers in which the first means is a flexible or freely pivoted element mounted on a second means movable about an axis, the first means partaking of the rotary or swinging motion, but having additional unconstrained movements determined by the resistance of the material.

229 This subclass is indented under subclass 226. Dispensers in which the agitating means and subsequent serially arranged means are axially aligned and so related to each other and the container that axially longitudinal movement of one is translated into axially rotary movement of the other, or both have combined axially rotary and longitudinal movement.

230 This subclass is indented under subclass 226. Dispensers in which the agitating means comprises a resilient or resiliently mounted means so constructed and organized as to have a definite agitating function, and which operates to bias the serially arranged subsequently acting means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

336+, for discharge assistants having biasing means, which means have no added features of structure for, nor particular relationship to cause, agitation.

511+, for movable dispenser outlet elements having biasing means, which means have no added features of structure for, nor particular relationship to cause, agitation.

231 This subclass is indented under subclass 226. Dispensers in which the interconnection between the first and second means consists in a mere contact or abutting relation of the means which transmits the movement of one to the other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

196+, for discharge assistants in series and having direct operating connection (1) where the relationship is between two vibrating members, (2) where the operation of either is vibratory and not limited to a single stroke for each discharge cycle of the other, or (3) where the vibrating member carries all or part of the supply load.

232 This subclass is indented under subclass 226. Dispensers having one rotary means (i.e., the agitator, discharge assistant or valve is rotary) to which the other means (which may be rotary or nonrotary) is connected for relative motion at a point removed from the axis, as by a crank, cam, or other eccentric element.

233 This subclass is indented under subclass 226. Dispensers in which at least one of the serial means rotates and at least one reciprocates (including oscillates).

SEE OR SEARCH THIS CLASS, SUBCLASS:

404, for miscellaneous compound motion discharge assistants.

234 This subclass is indented under subclass 233. Dispensers in which the means that reciprocates is not pivoted.

235 This subclass is indented under subclass 234. Dispensers in which the first of the series, i.e., the agitator, is rotary.

236 This subclass is indented under subclass 226. Dispensers in which each of the serially arranged means rotates about an axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

271+, for plural rotary discharge assistants and trap chambers arranged in sets.

293+, and 311+, for rotary devices with discharge volume varying means.

367+, for rotary trap chambers.

410+, for miscellaneous rotary discharge assistants.

237 This subclass is indented under subclass 236. Dispensers in which the serial means comprise juxtaposed rings or plates rotating in opposite directions, or at different speeds in the same direction.

238 This subclass is indented under subclass 236. Dispensers in which the axes of the serial rotary means are parallel or substantially so.

239 This subclass is indented under subclass 236. Dispensers in which the serial rotary means have a common axis.

240 This subclass is indented under subclass 239. Dispensers having (1) the first of the serial means (i.e., the agitator) in the form of a screw, helix, or one or more vanes, and (2) the second means operating at the discharge end thereof.

SEE OR SEARCH THIS CLASS, SUBCLASS:

241, for combinations where the agitator is not of screw, helix, or vane but a following discharge assistant is.

241 This subclass is indented under subclass 239. Dispensers in which (1) the agitator (first of the series) is of any form, and (2) a following discharge assistant is in the form of a screw, helix, or one or more vanes.

SEE OR SEARCH THIS CLASS, SUBCLASS:

240, for this combination where the agitator is of screw, helix, or vane form.

242 This subclass is indented under subclass 239. Dispensers having the first or agitator means (which may be merely one or more projections), mounted rigidly on a second means in the series, either axially or eccentrically.

(1) Note. If the mounting is on a common shaft or support rather than direct, see the preceding subclasses.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 203 for article dispensing devices having rotary agitating means rigidly mounted on discharge assistant means.

243 This subclass is indented under subclass 226. Dispensers in which all of the serially arranged means reciprocate (including oscillate).

SEE OR SEARCH THIS CLASS, SUBCLASS:

275+, for plural reciprocating (including oscillating) discharge assistants arranged in sets.

361+, for reciprocating (including oscillating) trap chambers.

409, for miscellaneous reciprocating (including oscillating) discharge assistants.

244 This subclass is indented under subclass 243. Dispensers having the serial means relatively movable in parallel planes.

245 This subclass is indented under subclass 243. Dispensers having one of the serial means reciprocating about a pivot (oscillating) and a second means reciprocating, but not pivoted. Such means may occur in any sequence.

246 This subclass is indented under subclass 243. Dispensers having the serial means moving toward and away from the outlet and along or parallel to the axis of the outlet.

(1) Note. Where the outlet from the receptacle is a bent conduit, the motion is along or parallel to at least that portion thereof that communicates with the receptacle interior.

247 This subclass is indented under subclass 243. Dispensers having the serial means all reciprocating about pivots (i.e., oscillating).

248 This subclass is indented under subclass 247. Dispensers in which the serial means are rigidly connected or integral and oscillate together as a unit.

249 This subclass is indented under the class definition. Dispensers having a chamber containing a piston impelled successively in opposite directions by material entering under pressure, the material in the contracting side being expelled by the piston movement.

SEE OR SEARCH THIS CLASS, SUBCLASS:

253, for material operated differential piston.

SEE OR SEARCH CLASS:

73, Measuring and Testing, subclasses 239+ for reciprocating piston meters. A device as defined in this subclass (249) having means controlled by piston movement, material pressure, etc., for reversing the flow control means to admit the material to the contracted chamber and thus be continuously operated so long as material flows, is considered a meter.

417, Pumps, subclasses 392+, for pumps having a single piston common to motor and pump chambers.

250 This subclass is indented under subclass 249. Dispensers having means for varying the capacity of the chamber and/or the stroke of the piston to vary the volume discharged.

SEE OR SEARCH THIS CLASS, SUBCLASS:

282+, and see the notes thereto for other combinations involving discharge volume varying means.

309, for adjustable stops for limiting the movement of a pump piston, pulsator, or follower in a chamber to vary the discharge volume.

251 This subclass is indented under the class definition. Dispensers having one or more discharge assistants, as impellers, pumps, conveyors, or movable trap chambers, as defined in Lines With Other Classes and Within This Class, Discharge Assistants (e.g., Impellers, Pumps, Conveyors, Movable Trap Chambers, Etc.), in the main class definition.

(1) Note. Elements suspended in supply containers for movement by pressure of the material and/or gravity to prevent material bridging are in this subclass (251).

(2) Note. In subclass 416 siphons are considered as means to be excluded by the above definition.

(3) Note. Any preceding subclass may have the subject matter defined as going into this and the indented subclasses, in particular combinations hereinbefore provided for. Those considered worth special mention are set forth in notes to this and the indented subclasses. Also noted are those subclasses which follow this group that have subject matter sufficiently related to be specially mentioned.

(4) Note. See Lines With Other Classes and Within This Class, Pumps, for notes to related subject matter in other classes.

SEE OR SEARCH THIS CLASS, SUBCLASS:

3+, for gas or vapor dispensers and such dispensers combined with means to dispense liquids and solids, i.e., nongaseous materials. Where gases or vapors are used for the purpose of causing nongaseous materials to be dispensed but there are no means for dispensing the gases or vapors other than to the nongaseous material dispenser and/or venting the same, the patent is not in subclass 3, but in subclasses 251+ or other preceding subclass appropriate to the type of nongaseous material dispenser.

9+, for article dispensers.

80+, particularly subclass 82 for cutter and/or punch combinations.

92+, for combinations with a collapsible wall receptacle.

129+, where there are plural sources from which to dispense plural compartments or receptacles with means to dispense from at least one or a receptacle with a spaced jacket.

160+, where dispenser supply receptacle is mounted for motion.

173+, where a casing or support for the dispenser is claimed, particularly subclass 177 for combinations where a vehicle ground engaging wheel is interconnected with a discharge assistant to operate the same.

195, where a gas is used to agitate the material to be dispensed.

196+, where dispensing is aided by jarring dispenser parts or having vibrating dispenser parts.

204, where a siphon is combined with a nongravity discharge assistant.

206+, where one or more walls or portions thereof are resilient.

216+, where there is an agitator or ejector so related to (1) a conveyor type discharge assistant having trap chambers or grooves, or (2) a movable trap chamber, as to stir or otherwise help to dislodge material therein.

226+, for combinations of discharge assistants and/or movable trap chambers serially arranged, the first discharge assistant of the series to operate on the material dispensed being an agitator.

249+, for dispensers having a floating piston movable alternately in opposite directions to discharge material.

416, see (1) Note.

425, through 458, for nonmovable trap chambers.

464.1+, for dispensers comprising a container and internally extending outlet pipe so arranged that suction is necessary to cause discharge, no suction means being claimed.

491+, for dispenser outlets having movable elements (such as flow controllers, closures, nozzles, or other discharge guides) which are caused to move due to pressure of the material to be dispensed, the means for creating such pressure not being claimed.

576, and indented subclasses 577, 578+ and 583 for a dispensing inkwell including a discharge assistant.

630+, where a flowing fluid picks up and carries the material to be dispensed.

SEE OR SEARCH CLASS:

65, Glass Manufacturing, subclasses 324+ for glass melt dispensing means including a discharge assistant.

137, Fluid Handling, subclasses 565.01+ for distribution systems comprising pumps.

221, Article Dispensing, subclasses 208+ for article dispensing devices having discharge assisting means.

401, Coating Implements With Material Supply, subclasses 143+, wherein the implement includes force-producing means for either filling the reservoir thereof or for moving material from the reservoir to the applying tool.

414, Material or Article Handling, appropriate subclasses (e.g., 209+, 304+, etc.) for a chamber, receptacle, or other load holder provided with a driven or nongravity type of material discharging means, and other appropriate subclasses (e.g., 216, 328+, etc.) for a chamber, receptacle, or other load holder which discharges material by gravity, and wherein a guide, gate, or other flow-affecting device is provided.

252 This subclass is indented under subclass 251. Dispensers having at least two distinct discharge assistants claimed in combination.

(1) Note. The plurality may be arranged in series and/or in parallel. One may be an arrangement to apply fluid under pressure directly to the material to be dispensed to cause dispensing.

(2) Note. Plural elements which act together as a single discharge assistant have been so treated (as plural vanes or blades, plural screws, plural movable sequentially operable traps, etc.) but where pumps or pulsators have plural chambers, each chamber having a forcing device therein, the structure has been treated as plural and not as a single pump or pulsator with plural cylinders.

SEE OR SEARCH THIS CLASS, SUBCLASS:

135+, for this subject matter where there are at least two sources of material to be dispensed.

216+, for combinations of agitator and/or ejector for removing and/or assisting in removing material from either (1) a conveyor type discharge assistant having trap chambers or grooves, or (2) movable trap chambers.

226+, for this subject matter in series arrangement, the first of the series being an agitator.

SEE OR SEARCH CLASS:

100, Presses, subclasses 138+ for diverse type presses not otherwise classified in which one of the presses is of the type which forwards material while it compresses it.

198, Conveyors: Power-Driven, appropriate subclasses for plural conveyors, including 570+.

221, Article Dispensing, subclasses 224+ for article dispensing devices having plural discharge assisting means or discharge assisting means combined with manipulating means.

253 This subclass is indented under subclass 252. Dispensers having two forcing devices, a quantity being fed by one device at one pressure, the second forcing device taking a part of such quantity and delivering it under higher pressure to the point of use by energy derived from the said quantity.

SEE OR SEARCH CLASS:

417, Pumps, subclasses 225+, for pumps in which a quantity of fluid at one head is divided with the head of one portion being utilized to increase the head of the other.

254 This subclass is indented under subclass 252. Dispensers having three or more distinct discharge assistants arranged in series, i.e., the material from the supply chamber is operated upon by the first of series, and the others of the series sequentially operate upon the same until it is discharged.

SEE OR SEARCH THIS CLASS, SUBCLASS:

227, for this subject matter in series arrangement, the first of the series being an agitator.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 225 for article dispensing devices having three or more distinct discharge assistants or manipulating means arranged to serially act on articles to be dispensed and see also subclass 201 for similar combinations in which at least one of the means is an agitating means.

255 This subclass is indented under subclass 252. Dispensers in which all the discharge assistants are pumps.

SEE OR SEARCH THIS CLASS, SUBCLASS:

254, for plural dispensing pumps with one or more discharge assistants of other types.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 565.29+ for distribution systems comprising plural

256 This subclass is indented under subclass 252. Dispensers having two discharge assistants, one being a follower and one being a casing enclosed impeller (such as a pump or a pulsator).

(1) Note. For the most part, the follower acts on the material in the supply container while the casing enclosed impeller receives material therefrom and discharges the same.

(2) Note. Discharge assistants, even though casing enclosed, which will not operate to increase pressure on the material dispensed, were not considered casing enclosed impellers. Those functioning merely to convey without increase in pressure or merely to agitate are examples.

SEE OR SEARCH THIS CLASS, SUBCLASS:

372+, for supply containers having no means for creating pressure on the contents which deliver to a chamber enclosing an impeller (i.e., a pump or pulsator) or to a chamber having a follower or other form of discharge assistant and from which the material is in turn discharged, and see the notes to such subclasses for related art.

386+, for containers having a follower therein, and see the notes for related art.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclasses 226+ for article dispensing devices having plural discharge assisting means or discharge assisting means combined with manipulating means and in which at least one of the discharge assisting means is of the follower type.

257 This subclass is indented under subclass 256. Dispensers in which the tubular outlet through which the material is dispensed is movably mounted on the dispenser, which tubular outlet is interconnected with at least one of the two discharge assistants (follower or casing enclosed impeller) as defined in subclass 320.

(1) Note. Where the nozzle is so mounted on the dispenser as not to be movable relative thereto, it is not in this or the indented subclasses, even though the nozzle is made of flexible material (as a hose) and is capable of motion due to this fact. Also where the nozzle is movably mounted on the dispenser, but the defined interconnection is not present, it is not in this and the indented subclass, but in other appropriate subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

320+, where there is a single discharge assistant.

344+, for movable trap chambers and conveyor type trap chambers resembling movable nozzles, particularly subclasses 361+.

492+, 499, 513+, 519+, 522+, and 526+, for movable nozzles not associated with discharge assistants.

258 This subclass is indented under subclass 257. Dispensers which utilize either fluid under pressure or a motor to operate either or both the follower or impeller.

(1) Note. The motor may be of any type including those operated by fluid pressure and may directly operate the discharge assistants or it may operate devices which develop fluid pressure which in turn operates to apply pressure to the discharge assistant.

SEE OR SEARCH THIS CLASS, SUBCLASS:

261, through 263, for other combinations of plural discharge assistants with motors or utilizing fluids under pressure.

333+, and the notes thereto, for other motor combinations.

394+, and the notes thereto, for other fluid pressure combinations.

259 This subclass is indented under subclass 257. Dispensers in which the follower and the casing enclosed impeller are both (1) either arranged coaxially or with their axes parallel and (2) interconnected.

(1) Note. The interconnection may be that the casing enclosed impeller is arranged to pass into or through an opening in the follower.

SEE OR SEARCH THIS CLASS, SUBCLASS:

260+, for this subject matter where there is no interconnection between one of the discharge assistants and a movable nozzle, even though the nozzle is movably mounted on the dispenser.

260 This subclass is indented under subclass 256. Dispensers in which the follower and the casing enclosed impeller are both (1) coaxial or with their axes parallel and (2) interconnected.

(1) Note. The interconnection may be that the casing enclosed impeller is arranged

to pass into or through an opening in the follower.

SEE OR SEARCH THIS CLASS, SUBCLASS:
259, where there is also an interconnected movable nozzle.
378, for coaxially arranged outlet nozzle, supply container and single discharge assistant.

261 This subclass is indented under subclass 260. Dispensers which utilize either fluid under pressure or a motor to operate either or both the follower or impeller.

SEE OR SEARCH THIS CLASS, SUBCLASS:
258, and see the notes to the definition therof for related subject matter.

262 This subclass is indented under subclass 256. Dispensers utilizing either fluid under pressure or a motor to operate either or both the follower or impeller.

SEE OR SEARCH THIS CLASS, SUBCLASS:
258, and see the notes thereto for related subject matter.

263 This subclass is indented under subclass 252. Dispensers utilizing either fluid under pressure or a motor to operate one or more of the plural discharge assistants, or one or more fluid pressure discharge assistants.

SEE OR SEARCH THIS CLASS, SUBCLASS:
258, and see the notes thereto for related subject matter.

264 This subclass is indented under subclass 252. Dispensers having two or more co-axial rotors with axially opening trap chambers or a single rotor with two or more concentric rows of such trap chambers, so that two or more discharge paths for material are provided.

(1) Note. Where there are co-axial rotors they may lie in the same plane, as one being an annulus surrounding the other.

265 This subclass is indented under subclass 252. Dispensers having plural discharge assistants all of which perform substantially the same function and have similar structure, so that the general effect is duplication of dispensing units.

(1) Note. Such means may be of unitary structure where it provides plural separate discharge paths even though they all deliver to a common outlet, but a unitary device which both provides a single discharge path and delivers to a single outlet is classified as a single discharge assistant.

(2) Note. Plural discharge assistants which are alternatively usable only may be considered to be in sets if they have similar structure. If the structures are dissimilar, see subclasses 278+.

(3) Note. Plural discharge assistants, even though they move in different directions, which are so related as to form a single outlet between them and thus move material therethrough in the same general direction are not considered to be in sets, see subclasses 280+.

(4) Note. Discharge assistants having plural vanes or blades movable as a unit and all of which move the material in a single discharge path to a single outlet are not considered to be plural discharge assistants.

(5) Note. A single rotor having plural vanes is regarded as being in sets only if each has a separate discharge outlet associated with it.

SEE OR SEARCH THIS CLASS, SUBCLASS:
278, see note 2.
280, see note 3.

SEE OR SEARCH CLASS:
73, Measuring and Testing, subclasses 426+ for receptacles provided with separable partition means which are applied to the receptacle to divide its

contents into a plurality of measured charges.

266 This subclass is indented under subclass 265. Dispensers having means to prevent discharge from certain of the discharge assistants while others are in use, i.e., having some means by which the desired one or more discharge assistants are caused to be operative to discharge while the other one or more are prevented from causing discharge (whether maintained in motion or not).

(1) Note. Individual discharge controllers for each outlet or discharge assistant path are not included, see subclasses 310+.

SEE OR SEARCH THIS CLASS, SUBCLASS:

278+, for alternatively usable discharge assistants of different types, where the arrangement provides for discharging from one at a time only. Plural devices comprising a unitary rotor structure are ordinarily considered of similar types, even though the several devices have different characteristics.

310+, see note 1.

267 This subclass is indented under subclass 265. Dispensers in which unitary or interconnected means is provided for changing the discharge capacity of all the discharge assistants.

SEE OR SEARCH THIS CLASS, SUBCLASS:

282+, for discharge volume varying means for devices not arranged in sets and see the notes for other combinations having such means.

268 This subclass is indented under subclass 267. Dispensers in which the devices whose discharge volume is varied are rotors.

269 This subclass is indented under subclass 265. Dispensers having a supply receptacle having a sectional bottom or wall construction, each section being related to one of the discharge assistants.

SEE OR SEARCH THIS CLASS, SUBCLASS:

270, where miscellaneous means are provided within the supply receptacles for guiding material to the discharge assistant.

329, for movable or removable depending cups for discharge assistants of rotor form.

270 This subclass is indented under subclass 265. Dispensers having means within the supply receptacle for guiding material toward the adjacent discharge assistants.

SEE OR SEARCH THIS CLASS, SUBCLASS:

269, for sectional walls related to the discharge assistant.

328, for similar guides for dispensers having single discharge assistants.

271 This subclass is indented under subclass 265. Dispensers in which the discharge assistants rotate each around its own axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

233+, and 236+, for such subject matter having a serially arranged preceding agitator.

282+, particularly 293+, and 311+, for rotors with discharge volume varying means, the rotors not being arranged in sets.

344+, particularly subclasses 367+, for miscellaneous rotary conveyor type or movable trap chambers.

410+, for miscellaneous rotary discharge assistants (not of the conveyor type trap chamber or movable trap chamber type).

272 This subclass is indented under subclass 271. Dispensers having discharge assistants related as right hand and left hand members moving the material in opposite directions either toward the same outlet or simultaneously toward different outlets.

(1) Note. Drum and cup type rotors having oppositely directed material contacting

faces are not included, see subclasses 273+.

SEE OR SEARCH THIS CLASS, SUBCLASS:

273, see note 1.

280, where plural discharge assistants form a single opening between them, and thus operate together to move material between them in the same general direction.

273 This subclass is indented under subclass 271. Dispensers in which the rotary devices are coaxial or substantially so.

274 This subclass is indented under subclass 273. Dispensers in which the rotary devices are substantially spaced along the common axis.

275 This subclass is indented under subclass 265. Dispensers in which the discharge assistants reciprocate (including oscillate).

SEE OR SEARCH THIS CLASS, SUBCLASS:

243+, for serially arranged devices, the first being an agitator, all having such motion.

361+, for conveyor type or movable trap chambers having such motion.

409, for miscellaneous discharge assistants having such motion.

276 This subclass is indented under subclass 275. Dispensers having unitary or rigidly connected discharge assistants forming a set.

277 This subclass is indented under subclass 276. Dispensers having a to and fro movement about an axis.

SEE OR SEARCH CLASS:

177, Weighing Scales, subclasses 94+ and 115 for an oscillating weigh chamber.

278 This subclass is indented under subclass 252. Dispensers in which each of the plural discharge assistants is used or intended to be used by itself.

(1) Note. These devices are usually separately usable depending upon the type of material placed in the dispenser, or to give a different mode of discharge of the same type of material.

SEE OR SEARCH THIS CLASS, SUBCLASS:

265+, for devices arranged in sets, note 2 of subclass 265 stating the line, subclass 266 having devices arranged in sets with means for selecting less than all for discharge.

288, for interchangeable, removable or selectively usable discharge assistants or elements and see the notes thereto for the line.

279 This subclass is indented under subclass 278. Dispensers having means such as removable or shiftable covers or baffles for preventing access of material to the discharge assistant that is not in use.

280 This subclass is indented under subclass 252. Dispensers having the plural devices forming the edges, walls, or borders of a single discharge outlet and all movable together to cause material motion through such single outlet.

SEE OR SEARCH THIS CLASS, SUBCLASS:

198, for outlets bounded or formed by plural vibrating members.

265, for devices arranged in sets, and see note 3 for the line.

281 This subclass is indented under subclass 280. Dispensers in which the plural devices are all in the form of parallel rotary rolls (drums) of any cross sectional shape.

SEE OR SEARCH THIS CLASS, SUBCLASS:

271+, for rotary sets, and see the notes thereto.

SEE OR SEARCH CLASS:

100, Presses, subclasses 155+ for roll type presses, not elsewhere classified, for concurrently pressing and conveying material.

282 This subclass is indented under subclass 251. Dispensers having means to vary the output (discharge volume) from the discharge assistant for a given cycle of operation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

14+, especially subclass 21, for preset means for selective dispensing of different volumes from a dispenser.

134, for dispenser involving plural sources and having interconnected discharge volume varying means.

163, for supply receptacles mounted for motion for discharge volume varying purposes.

250, for dispensers having a floating piston with plural or alternate discharge paths and discharge volume varying means.

266, where there are plural discharge assistants arranged in sets and discharge volume is varied by selecting less than all for discharge.

267+, where there are plural discharge assistants arranged in sets with common discharge volume varying means.

278, for plural alternatively usable discharge assistants which may discharge different volumes.

434+, for trap chamber cutoff combinations with discharge volume varying means, the trap chamber not being movable.

SEE OR SEARCH CLASS:

92, Expansible Chamber Devices, subclasses 13+ for stroke varying means for expansible chamber devices.

198, Conveyors: Power-Driven, for a conveyor having means for controlling the flow of conveyed material, particularly subclasses 525+, 577, 670, and 761.

221, Article Dispensing, subclasses 241+ for article dispensing devices having means to adjust the size of the device to accommodate different size articles, and subclasses 206+ for article dispensing devices having quantity preselection means included therewith.

417, Pumps, appropriate subclasses for pumps with capacity varying means.

418, Rotary Expansible Chamber Devices, subclasses 16+ for capacity varying means for rotary expansible chamber pumps.

283 This subclass is indented under subclass 282. Dispensers having two or more independent means for varying the discharge volume.

(1) Note. Sectional devices, each part of which controls a corresponding part of the outlet are not considered plural. See appropriate following subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

486, for plural discharge controllers for plural dispensing outlets variably related.

284 This subclass is indented under subclass 282. Dispensers having a plurality of conveyor type or movable trap chambers, usually joined, so arranged that discharge can be terminated after any desired number have been discharged. Endless and drum types are included when provided with detent means to check movement after a variable number of chambers have been discharged.

SEE OR SEARCH THIS CLASS, SUBCLASS:

436, for nonmovable trap chambers in series for discharge volume varying.

285 This subclass is indented under subclass 282. Dispensers having (1) an element forming part of or carried by the source of supply and (2) a discharge assistant movable relatively to each other in a direction axial to the source outlet to widen the discharge path, place varying areas of the discharge assistant in operative position or otherwise vary the output.

SEE OR SEARCH THIS CLASS, SUBCLASS:

163, for supply receptacles mounted for movement for discharge volume varying purposes.

286 This subclass is indented under subclass 285. Dispensers having the section of the discharge conduit or receptacle adjacent the discharge assistant telescopically related to the main part for adjustment.

SEE OR SEARCH CLASS:

100, Presses, subclasses 144+ for presses not elsewhere classified, in which material is concurrently compressed and conveyed.

287 This subclass is indented under subclass 282. Dispensers having a relatively movable actuator for the discharge assistant which embodies the output adjusting means.

288 This subclass is indented under subclass 282. Dispensers having a part or parts of the discharge assistant means exchangeable or removable bodily or to an inoperative relation or position to vary the output.

(1) Note. The discharge assistant may have its capacity or its mode of operation changed, as from conveyor type trap chamber to conveyor type, but it remains in use as the discharge assistant, as distinguished from alternatively usable discharge assistants, where one goes out of use.

SEE OR SEARCH THIS CLASS, SUBCLASS:

278+, for alternatively usable devices.

289 This subclass is indented under subclass 288. Dispensers in which the part or parts are reversible in their relation to the rest of the device to bring one of two alternatively usable elements into operation. Mere shifting of a rotary or pivoted part about its usual axis is not considered reversibility.

290 This subclass is indented under subclass 282. Dispensers having a means for conveying material past the outlet and adjustably positioned means for deflecting a desired part of the material into the outlet.

SEE OR SEARCH THIS CLASS, SUBCLASS:

408, for similar structure having no volume varying means claimed.

291 This subclass is indented under subclass 282. Dispensers having a movable discharge assistant having blades or other projections which are alternatively projected from and withdrawn into the body of the discharge assistant as it moves, and means to vary the extent of maximum projection.

292 This subclass is indented under subclass 282. Dispensers having a rotary conveyor type discharge assistant or rotary trap chamber with radially movable projections or trap elements interconnected to be adjusted by a common means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

303, for rotor parts having traps or grooves and a second rotor part having elements to block the traps or grooves, the two parts being relatively adjustable axially.

293 This subclass is indented under subclass 282. Dispensers in which there is a rotor, which is made up of at least two rotor parts, each rotary about the same axis, with means to relatively adjust the same to vary the discharge volume.

(1) Note. These are of two general types, (1) those in which the two rotor parts extend radially about the same axis (including complete annuli) and swing or rotate about such axis for adjustment, and (2) those in which the two rotor parts are axially adjacent or spaced and move axially for adjustment.

(2) Note. A rotor form element must be either (1) symmetrically disposed about the axis of the whole rotor, or (2) mounted on the axial support of the whole rotor.

(3) Note. The adjustment is usually to either change a trap chamber size or to change the size of a material passage through or past the rotor.

SEE OR SEARCH THIS CLASS, SUBCLASS:

268, for sets of rotors with common discharge volume varying means.

311+, for rotors with discharge controllers acting as discharge volume varying means.

367+, for miscellaneous rotary trap chambers and see the notes thereto for other rotors.

294 This subclass is indented under subclass 293. Dispensers having the rotor form parts, each of generally disk or annular form, of substantially equal diameter and coaxial, and adjustable relative to each other by a motion of rotation about the axis of rotation to change the discharge volume.

SEE OR SEARCH THIS CLASS, SUBCLASS:

302, for disks adjustable linearly along the axis for volume adjusting purpose.

295 This subclass is indented under subclass 293. Dispensers having the rotor form parts adjustable relatively to each other linearly in the direction of the axis of rotation to vary the discharge volume.

296 This subclass is indented under subclass 295. Dispensers comprising a disk rotor having a face contacting the material and a rotor member having pins which project through or past the disk in the direction of the axis of rotation, at least a portion of the pins being in the material passage formed in part by the material contacting face of the disk, the pins and disk being relatively axially adjustable.

(1) Note. The pins may have any shape in cross-section.

297 This subclass is indented under subclass 295. Dispensers having one rotor part of a generally cup shape, with the material discharge path along the inner wall of the cup, the cup rotating about its center on a horizontal axis, the cup volume being varied by an axially adjustable rotor part.

(1) Note. The cup may be divided into plural pockets.

SEE OR SEARCH THIS CLASS, SUBCLASS:

315, for horizontal axis cup rotors having a discharge controller to vary discharge volume.

298 This subclass is indented under subclass 295. Dispensers having at least one grooved or trap carrying rotor part bodily movable in and/or through a discharge channel and relative to another rotor part so as to vary either (1) the area available for passage of the material or (2) the character of the means acting on the material to produce discharge.

299 This subclass is indented under subclass 298. Dispensers having means associated with axially adjustable rotor parts to block the portion of the discharge channel not directing material to or from the discharge effecting portion of the rotor.

(1) Note. Such channel blocking means is not independent of the slidable rotor part and usually is movable an amount proportionate to the slidable adjusting motion thereof.

300 This subclass is indented under subclass 299. Dispensers having the channel blocking means comprising in part at least a sleeve which does not rotate.

(1) Note. The sleeve is usually slidably adjustable.

301 This subclass is indented under subclass 298. Dispensers in which one rotor part is peripherally fluted and another is a correspondingly interiorly fluted annular disk-like member, the interior flutes of which interfit with the peripheral flutes, the annular disk bearing on the stationary structure and closing the space between it and the first rotor part (to thereby prevent material leakage).

SEE OR SEARCH THIS CLASS, SUBCLASS:

299, and 300, in which search must be completed.

302 This subclass is indented under subclass 295. Dispensers in which the axially adjustable rotor parts each have at least one material passage extending therethrough in alignment with each other and parallel to the axis of rotation.

(1) Note. The two material passages generally have telescopic interengagement so

that relative axial adjustment changes the volume of the passage, the passage functioning as a trap chamber, receiving material at one location and discharging it at another. Usually the two rotor elements are constructed to have plural such chambers which sequentially fill at one location and discharge at another.

303 This subclass is indented under subclass 295. Dispensers in which one rotor part has either (1) one or more trap chambers therein, or (2) peripheral grooves, and the second relatively adjustable rotor part has one or more elements to block or fill such trap chambers or grooves to different extents to vary their volume upon relative axial adjustment.

SEE OR SEARCH THIS CLASS, SUBCLASS:

292, for related structures where the relative motion is radial of the rotor.

304 This subclass is indented under subclass 303. Dispensers in which the relative axial adjustment is between a single trap chamber coaxial of one rotor part and an axially adjustable wall or block forming the other rotor part.

305 This subclass is indented under subclass 282. Dispensers having means for varying either the actual or the effective capacity of material traps of the conveyor or movable chamber type.

SEE OR SEARCH THIS CLASS, SUBCLASS:

344+, for conveyor type or movable trap chambers not having volume adjusting means.

306 This subclass is indented under subclass 305. Dispensers having trap chambers with a single opening for both the entrance and discharge of the material received from the supply and having only the wall opposite the opening, i.e., the bottom of the trap chamber, adjustable to vary the capacity of the trap chamber.

SEE OR SEARCH THIS CLASS, SUBCLASS:

444, and see the notes thereto, for other trap chambers having inflow-outflow passages.

307 This subclass is indented under subclass 305. Dispensers having at least one wall of the trap chamber adjustable by bodily inward or outward movement to the same extent in all its parts to vary the capacity of the trap chamber.

SEE OR SEARCH THIS CLASS, SUBCLASS:

304, for axial pocket rotary trap chambers having an adjustable wall to vary the capacity.

440, for straight line motion adjustable walls for stationary trap chambers.

308 This subclass is indented under subclass 307. Dispensers having the wall adjustable by screw means.

309 This subclass is indented under subclass 282. Dispensers in which a pump, piston, pulsator or follower is caused to move through a chamber to eject or force material the volume delivered being varied by adjusting a stop means which limits the motion of the forcing device or the position of the ejecting means with reference to a stationary stop.

(1) Note. There may be plural spaced stops selectively movable to operative position, which plural stops may, in addition, be individually adjustable, or there may be a single adjustable stop means. Such stop means may be carried or supported in any way to perform their function, as on the frame, container, or movable forcer element.

SEE OR SEARCH THIS CLASS, SUBCLASS:

250, for discharge volume varying means including adjustable stop, for floating pistons having plural or alternate discharge.

SEE OR SEARCH CLASS:

73, Measuring and Testing, subclass 429, for measuring vessels having adjustable bottoms but in which the bottom is not adapted to force the material from the container.

92, Expansible Chamber Devices, subclasses 13+ for stroke adjusting means for expansible chamber devices.

310 This subclass is indented under subclass 282. Dispensers having the discharge capacity varied by means of movable gates, valves, or other discharge controller.

SEE OR SEARCH THIS CLASS, SUBCLASS:

417, and the subclasses following the same, for dispensers having gates, valves, closures, and other discharge controllers in various combinations not involving a discharge assistant.

311 This subclass is indented under subclass 310. Dispensers having a rotary discharge assistant and a discharge controller for varying the discharge volume by relative adjustment therebetween.

(1) Note. Many of the preceding subclasses indented under subclass 282 have rotors with other types of discharge volume varying means, all conveyor type or movable trap chambers with trap capacity varying means being in preceding subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

282, see note 1 above.

367+, and see the notes thereto for other rotary conveyor type and movable trap chambers.

410+, and see the notes thereto for other rotary discharge assistants.

312 This subclass is indented under subclass 311. Dispensers having the variable material passage between a drum type rotor and the discharge controller.

313 This subclass is indented under subclass 312. Dispensers having the discharge controller urged toward a desired position by spring, weights or other biasing means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

511+, and see the notes to the definition thereof for biased flow controllers in other combinations.

314 This subclass is indented under subclass 312. Dispensers having a nonpivoted discharge controller movable in a single plane toward and from the rotor.

SEE OR SEARCH THIS CLASS, SUBCLASS:

351, for a similarly movable element forming a striking or clearing element for a conveyor type trap chamber.

315 This subclass is indented under subclass 311. Dispensers in which the rotary discharge assistant is of cup shape rotating on a horizontal axis, material flow being from the supply to the interior of the cup to discharge, the discharge controller varying the size of the material passage inside the cup to vary discharge volume.

SEE OR SEARCH THIS CLASS, SUBCLASS:

297, for discharge assistants of this type having axially adjustable rotor parts for varying the discharge volume.

316 This subclass is indented under subclass 311. Dispensers having the discharge controller made up of two or more sections each controlling part of the discharge path.

(1) Note. The sections are usually independently biased or adjusted.

SEE OR SEARCH THIS CLASS, SUBCLASS:

502+, for miscellaneous dispensers having sectional discharge controllers.

317 This subclass is indented under subclass 311. Dispensers having the discharge controller in advance of the rotor, i.e., on the side of the rotor that receives material to be dispensed.

(1) Note. The discharge controller usually is adjustable relative to a container wall to vary the size of the passage leading to the rotor.

318 This subclass is indented under subclass 251. Dispensers in which material being dispensed may be by-passed around the pump, forcer, movable trap chamber or other discharge assistant, either (1) from the inlet side thereof to the discharge side thereof, (2) from the discharge side thereof back to the inlet side, (3) from the discharge side back to the supply, or (4) any combination of the preceding.

SEE OR SEARCH THIS CLASS, SUBCLASS:

72, for volume or rate of flow meter by-pass arrangements.

108+, for drip, leakage, or waste catching or disposal, including return to supply.

330+, for discharge assistants having plural outlets not involving a by-pass or return to supply.

345+, for striking and clearing means for conveyor type and movable trap chambers.

375, for miscellaneous casing enclosed discharge assistants and provided with antileak or antisiphon means.

424, for miscellaneous dispensers not having discharge assistants provided with means to return material to the supply.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 563 through 564.5 for closed circulation type distribution systems, subclass 569 for systems having a pump and a bypass for it, or subclasses 599.01-601.21 for systems dividing into a parallel flow lines then recombining.

221, Article Dispensing, subclasses 159+ for article dispensing devices including means to orient the dispensed articles and having means to return to supply such articles as are not properly oriented.

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 90 and 124+ for spraying systems having means to bypass some of the fluid back to the supply, or to vent the system by permitting the fluid to escape to the atmosphere other than through the usual spray outlet.

406, Conveyors: Fluid Current, subclass 105 for by-pass means around the fan.

417, Pumps, subclasses 279+ and 440+ for pumps with by-pass valves.

319 This subclass is indented under subclass 251. Dispensers in which the outlet for material to be dispensed from a supply receptacle or trap chamber is above the material surface level thereof, and there are structural means (as distinguished from fluids) which enters the mass of material in a supply receptacle, with a resultant displacement of a volume of material equal to the volume of that portion of the structural means that has entered the material, and thus cause the upper surface of the material to rise to or above the level of the outlet to overflow for discharge or for a step preliminary to discharge.

SEE OR SEARCH THIS CLASS, SUBCLASS:

373, for devices which introduce a liquid into contact with the material in a trap chamber to displace the material.

395, for devices which introduce liquid into a supply chamber into contact with the material to displace the same.

405, for miscellaneous discharge assistants which cause discharge from the top of the supply.

SEE OR SEARCH CLASS:

48, Gas: Heating and Illuminating, subclass 14, for such means for feeding water to acetylene generators.

137, Fluid Handling, subclass 101.11 for such means in a fluid handling system.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclass 245 for such means associated with filling apparatus.

320 This subclass is indented under subclass 251. Dispensers in which (1) the nozzle is connected to and bodily movable with a follower, (2) the nozzle is movable relative to the dispenser container and coacts with an element stationary relative to the dispenser container to cause forced discharge (as the movable nozzle constitutes a part of a pump or pulsator), (3) the nozzle is movable relative to the dispenser container and is interconnected in any way with a discharge assistant so that motion of the

nozzle is necessary for or occurs because of motion of the discharge assistant.

SEE OR SEARCH THIS CLASS, SUBCLASS:
257+, for this subject matter where there is claimed both (1) a follower and (2) a casing enclosed impeller.
526+, and see the notes thereto for movable nozzles not claimed in combination with discharge assistants.

321.1 With material supply container and discharge assistant casing:
This subclass is indented under subclass 320. Subject matter wherein the movable nozzle and interconnected discharge assistant are associated with a casing, and there is a container supplying a material to such casing.

SEE OR SEARCH THIS CLASS, SUBCLASS:
252+, for plural discharge assistants.

321.2 With precompression:
This subclass is indented under subclass 321.1. Subject matter including means for preventing a flow of material from the discharge assistant until a predetermined discharge pressure is reached.

321.3 With antileak or antisiphon means:
This subclass is indented under subclass 321.1. Subject matter including means to prevent leakage of the material from a discharge passage or means to prevent siphoning following the operation of the discharge assistant.

SEE OR SEARCH THIS CLASS, SUBCLASS:
72, for a volume or rate of flow metering with a by-pass, gas separation or antisiphon means.
73, for a volume or rate of flow metering with means for relieving or maintaining hose pressure.
108+, for means for catching or disposing of leakage, drip, or waste, including those which also return the same to the supply.
318, for means for by-passing a discharge assistant or for returning material from the discharge side thereof to the supply.
424, for a miscellaneous dispenser having means to return material to the supply.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 215+ for a back flow or siphon preventing in fluid handling system.
221, Article Dispensing, subclass 245 for an article dispensing device having a return stroke inhibiting means (i.e., full stroke-mechanism).
251, Valves and Valve Actuation, subclass 34 for a reverse flow prevention in fluid pressure type servo-motor valve actuator.

321.4 With plural-point inlet to casing:
This subclass is indented under subclass 321.1. Subject matter wherein there is a structure provided for inlet of the material from the supply container to discharge assistant casing from at least two spaced points.

(1) Note. This may be by providing plural inlet pipes or a single inlet pipe which may move from place to place within the dispenser due to flexibility or joints or any other means or which may have plural openings.

SEE OR SEARCH THIS CLASS, SUBCLASS:
381, for a movable discharge assistant casing which does not position the inlets at plural points.

321.5 Inlet trap (e.g., sump):
This subclass is indented under subclass 321.1. Subject matter wherein an inlet to the discharge assistant casing extends into a supplemental chamber communicating with the supply container.

(1) Note. The trap chamber may be formed by walls within the supply container, or by a depression in the bottom wall of the container.

SEE OR SEARCH THIS CLASS, SUBCLASS:
328, for a material discharge guide on the container side of the outlet.

321.6 Aligned discharge assistant, actuator, container and nozzle:
This subclass is indented under subclass 321.1. Subject matter wherein the discharge assistant, an actuating means on the discharge assistant, the container and the nozzle are arranged substantially coaxially.

SEE OR SEARCH THIS CLASS, SUBCLASS:
259, and 260+, for a similar arrangement involving more than one discharge assistant.
510, for a container having an oulet element in one wall and the actuator therefor passing through the container interior and another wall.

321.7 Container-mounted pump:
This subclass is indented under subclass 321.1. Subject matter wherein the encased discharge assistant is a pump which is mounted on the supply container.

SEE OR SEARCH THIS CLASS, SUBCLASS:
382, for a pump mounted on a supply container and having an internally extending pipe constituting an extension of the pump or the pulsator inlet.

321.8 With relatively movable actuator:
This subclass is indented under subclass 321.7. Subject matter including an actuator for the pump which is mounted for a relative movement with respect to a nozzle.

SEE OR SEARCH CLASS:
221, Article Dispensing, subclasses 272+ for an article dispenser having discharge assisting means with a relatively movable actuator.
251, Valves and Valve Actuation, subclasses for valve operating mechanisms (e.g., mechanical movement actuators for valves, subclasses 213+; lever actuated, subclasses 231+; geared, subclasses 248+; cam actuated, subclasses 251+; toggle actuated, subclasses 280; push or pull button, subclasses 319+).

321.9 Pump casing within supply container:
This subclass is indented under subclass 321.7. Subject matter wherein a casing or cylinder of the pump is located within the supply container.

322 This subclass is indented under subclass 251. Dispensers in which an actuator for a movable dispenser part projects through the dispenser outlet.

SEE OR SEARCH THIS CLASS, SUBCLASS:
149+, for cleaning elements extending through the dispenser outlet.
402.1+, particularly subclass 402.25 for dispensers with a fluid pressure discharge assistant which have a valve closing an opening for material which is opened by motion of an actuator extending through the opening, such opening not being the dispenser outlet discharging to atmosphere.
501, for such actuators for dispensers not having discharge assistants.

323 This subclass is indented under subclass 251. Dispensers claiming a handle or handgrip connected to the supply container and by means of which the dispenser may be handled.

(1) Note. The handle must be secured to the dispensing container for handling the container. The handles which are for operation of the discharge assistant means and/or its controls but not for handling the container are not included except when in combination with a container handle.

SEE OR SEARCH THIS CLASS, SUBCLASS:
79, for devices of this type simulating a firearm.
210, for this subject matter associated with resilient wall dispensers.
384, for pump or pulsator handles held against motion in a position to serve as handles for the supply containers.
402, for handles for operating fluid pressure generating pumps and pulsators and capable of use as container handles when held against motion.

441, for this subject matter associated with trap chambers having cutoffs, there being no discharge assistant.

465.1+, for miscellaneous dispensers having this subject matter.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 185 for body supported article dispensing devices including specific handle arrangements.

324 This subclass is indented under subclass 323. Dispensers in which the handle is associated with a combination which includes a material supply container which delivers material to a casing, the discharge assistant being associated with the casing.

325 This subclass is indented under subclass 251. Dispensers in which the container for the material to be dispensed is so related to the rest of the dispenser organization that it is separable therefrom (leaving the remaining portions in substantially normal operative relation) for either refilling or to be replaced by a full container.

(1) Note. A frame (carrying the nongravity discharge assistant or movable trap chamber) and comprising more than a mere closure for the separable container, into or from which the material container may be inserted or removed is included.

(2) Note. A cartridge is an auxiliary container to be inserted within another container.

SEE OR SEARCH THIS CLASS, SUBCLASS:

95+, where the inserted cartridge or container, is of the collapsible wall type designed to expel material when the wall is collapsed.

131, for dispensers with spaced jackets not for the sole purpose of receiving a separable supply container or cartridge.

182, and 183, for dispensers having enclosures or jackets not for the sole purpose of receiving a separable supply container or cartridge.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclasses 46+ for article dispensers of the napkin holder type having removable supply magazines associated therewith, subclasses 197+ for article dispensers having supply cartridges or containers removable from enclosing casings, and subclass 287 for article dispensers in which the container enclosing the articles and comprising a source of supply is removable from the remainder of the dispensing device.

326 This subclass is indented under subclass 325. Dispensers in which a follower is included in the dispenser organization with which the separable supply container or cartridge is associated, which follower operates to expel the contents of the container or cartridge.

SEE OR SEARCH THIS CLASS, SUBCLASS:

386+, for containers or cartridges having followers, the features for this subclass (326) not being claimed.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 198 for article dispensers having removable supply cartridges or containers with followers operating therein.

401, Coating Implements With Material Supply, subclass 135, wherein the implement includes an insertable, frangible-wall reservoir having a piston movable to force material into the reservoir or from the reservoir to the applying tool; and see the search notes to subclass 386 of this class (222).

327 This subclass is indented under subclass 326. Dispensers in which the follower forms part of the separable supply container or cartridge assembly.

328 This subclass is indented under subclass 251. Dispensers having means in addition to the necessary wall structure of the supply container on the container or supply side of the discharge assistant to guide material thereto for discharge.

SEE OR SEARCH THIS CLASS, SUBCLASS:

266, for covers for units of a set of discharge assistants.

270, for interior guide structure related to discharge assistants arranged in sets.

279, for guides constituting removable or shiftable baffles or covers for discharge assistants not in use.

547, for interior guide structure related only to dispensers having outlets with flow controllers or closures.

564, for miscellaneous interior guides.

329 This subclass is indented under subclass 251. Dispensers in which the material guides are removable or movable shaped casings for guiding material to rotary discharge assistants located below the main receptacle body.

SEE OR SEARCH THIS CLASS, SUBCLASS:

269, for supply containers having a lower wall composed of separable sections, each relating to or mounting one of a set of discharge assistants.

330 This subclass is indented under subclass 251. Dispensers having more than one outlet for material at least one being on the discharge side of a single discharge assistant.

SEE OR SEARCH THIS CLASS, SUBCLASS:

249+, for floating pistons having plural or alternate discharge.

478+, for miscellaneous dispensers having plural outlets, there being no discharge assistant claimed.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 262 for fluid handling means comprising flow dividing compartments; subclasses 597 and 861+ for distribution systems having plural outlets.

221, Article Dispensing, subclass 252 for article dispensing devices having discharge assisting means and plural outlets for the articles dispensed.

331 This subclass is indented under subclass 330. Dispensers having at least two of the plural outlets of different character.

(1) Note. For example, there may be a gravity discharge outlet in addition to the outlet for the discharge assistant.

SEE OR SEARCH THIS CLASS, SUBCLASS:

318, for plural outlets, one of which is a by-pass or return to supply passage.

332 This subclass is indented under subclass 251. Dispensers in which there is a vent passage for a movable trap chamber.

SEE OR SEARCH THIS CLASS, SUBCLASS:

478+, for miscellaneous dispensers with vent passages, and see the notes thereto for other dispensers with vent passages.

333 This subclass is indented under subclass 251. Dispensers having a motor to operate same.

SEE OR SEARCH THIS CLASS, SUBCLASS:

14+, where there is means to stop feed due to operation of a selectively preset volume or rate of flow responsive mechanism.

23+, for recorder, register, indicator, signal, or exhibitor combinations.

52+, especially subclass 63 for dispensers in which the motor is automatically controlled.

70, for timing mechanism combinations.

74+, for motors having an interlock or interconnection with a hose or other discharge guide.

76, for motors with nonautomatic electrical controls

178, for ambulant support-motor combinations.

252+, where one or more of plural discharge assistants are motor operated.

504, for dispensers outlet element-motor combinations.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 258 for article dispensers having motor operated discharge assisting means.

291, Track Sanders, subclass 20 for electric motor operated sanders.

334 This subclass is indented under subclass 333. Dispensers in which the motor is operated by fluid under pressure.

SEE OR SEARCH CLASS:

184, Lubrication, subclass 29 for fluid pressure operated pumps for lubricators.

291, Track Sanders, subclass 24 for fluid motor operated sanders.

335 This subclass is indented under subclass 251. Dispensers in which there is a discharge assistant which is actuated by the pressure of the material being dispensed, or by suction on such material, the pressure of suction creating means not being claimed.

(1) Note. The discharge assistant may be moved by the pressure of material and also require additional actuation (as manually) to cause discharge assisting function.

(2) Note. The pressure on the material may fill a trap chamber, and thereafter operate on a piston to cause the piston to move and force the material from the trap chamber.

(3) Note. Valve or closure elements on the interior of the receptacle caused to move toward closing position due to pressure on the contents and thus push material through the outlet are included.

SEE OR SEARCH THIS CLASS, SUBCLASS:

92+, for patents which claim characteristics of the collapsible wall or means for collapsing the same.

249+, for floating piston devices operated by material pressure.

252+, where a second means for creating pressure on the contents is claimed.

322, where means for operating the discharge assistant extends through the dispensing outlet.

491+, where the valve or closure does not push material through the outlet due to motion caused by pressure of the material.

336 This subclass is indented under subclass 251. Dispensers in which there are biasing means of spring or other form for moving to a desired position, either (1) the discharge assistant or (2) its enclosing casing.

(1) Note. Under section (1) of the above definition, the biasing means must act to move the discharge assistant to operative (discharging) or nonoperative (nondischarging) position. Biasing means operating on movable parts but not having such function are not included.

(2) Note. For section (2) of the above definition, see the definition of subclass 337.

SEE OR SEARCH THIS CLASS, SUBCLASS:

337, see note (2) above.

394+, for biasing means for fluid pressure generating pumps and pulsators.

407, for biased deformable discharge assistant elements, the biasing means not operating as in note (1) above.

511+, for biasing means for dispenser outlet elements, such as movable nozzles, valves, closures, or other flow controllers.

581, and 582, for a dispensing inkwell including a dip well which is a movable trap chamber biased toward resetting position; and see the search notes to these subclasses.

SEE OR SEARCH CLASS:

184, Lubrication, subclasses 45.1+ and 46, for lubricators with spring and weight operated followers.

337 This subclass is indented under subclass 336. Dispensers in which the biasing means has the sole function of increasing the resistance to material flow through a joint (contacting surfaces) between two relatively movable parts.

(1) Note. Where the biasing means has either the sole function of moving the movable part to operative (discharging) or nonoperative (nondischarging) position, or has such function in addition to the joint sealing function, see subclass 336 or other appropriate indented subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

512, for mere outlet structures with joint sealing biasing means.

338 This subclass is indented under subclass 337. Dispensers in which one or more of the walls for enclosing the discharge assistant is biased by spring or other means to engage the discharge assistant closely.

SEE OR SEARCH THIS CLASS, SUBCLASS:

345+, for a mere lip or attachment for leveling or striking off the charge in a trap chamber to prevent the passage of surplus material from the supply container. These may be biased, but do not enclose the trap chamber.

339 This subclass is indented under subclass 336. Dispensers in which the device biased has a motion of oscillation about its axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

516, for biased rotary outlet structures.

517, for oscillating outlet elements.

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning, subclass 257.072 for an inkwell which includes penpoint-actuated diaphragm means for forcing ink into a dip cup which is not a trap chamber because it is incapable of retaining the ink after cessation of the applied force.

340 This subclass is indented under subclass 336. Dispensers in which the device is either a piston or a follower type impeller having a reciprocating motion and operating in either the supply receptacle or in a casing which receives material from the supply container, so that motion of the piston or follower applies pressure to the material to cause discharge.

SEE OR SEARCH THIS CLASS, SUBCLASS:

336, for reciprocating piston form conveyors or movable trap chambers, including movable trap chambers in the form of a stem having plural concentric enlargements thereon.

372+, for supply receptacles delivering to casings having pistons or followers therein, no biasing means for causing piston or follower motion being claimed.

386+, for receptacles having followers therein, there being no biasing means for causing follower motion being claimed.

449, for trap chamber cutoffs with biasing means.

518, for biased, reciprocable outlet elements such as valves, nozzles, closures, etc.

582, for a dispensing inkwell including a discharge assistant which is biased toward a resetting position following an actuating stroke, usually in the direction of the supply.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 276 for article dispensers having spring biased reciprocating discharge assisting means, and subclass 271 for similar devices in which the reciprocating discharge assistant is spring biased to a discharging position.

341 This subclass is indented under subclass 340. Dispensers in which at least one biasing means is within a chamber or passage containing material to be dispensed.

342 This subclass is indented under subclass 251. Dispensers having means for cleaning, scraping or wiping the discharge assistant or means carried by the discharge assistant for cleaning, scraping or wiping the adjacent parts of its casing or the discharge path.

SEE OR SEARCH THIS CLASS, SUBCLASS:

148+, for cleaning means operating independently of the discharge assistant or for cleaning the supply container, material discharge guide or receiver.

216+, for agitators and/or ejectors for removing material from conveyors having trap chambers or grooves or from movable trap chambers of any kind.

345+, for conveyor type or movable trap chamber striking or clearing means.

636, for fluid flow discharge for movable conveyor type trap chambers.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclasses 494+ for a conveyor having installed as part of its structure a means for cleaning a component of the conveyor.

343 This subclass is indented under subclass 251. Dispensers having projecting parts of the discharge assistant following a path variable with respect to other parts, to increase and decrease the extent of projection. The purpose is to facilitate picking up and discharging material, not to vary the discharge volume.

SEE OR SEARCH THIS CLASS, SUBCLASS:

282+, for discharge assistants having discharge volume varying means and especially subclass 291 for devices similar to those having volume varying function.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 270 for article dispensers having reciprocating discharge assistants having retractable pusher elements.

418, Rotary Expansible Chamber Devices, subclasses 259+ for rotary expansible chamber devices of the positively actuated vane type and subclass 270, for similar devices in which the vane is not actuated or biased.

344 This subclass is indented under subclass 251. Dispensers having a chamber so constructed and related to the supply as to receive material therefrom, which chamber is movable mounted relative to the supply. The material in the trap chamber is isolated from the supply either by the relative movement of the supply and trap chambers or by special means as flow controllers, closures, etc.

(1) Note. A conveyor type trap chamber functions to convey (translate) the material from the inlet from the supply to a spaced outlet while some are movable chambers which, when moved to one position, permit material flow thereinto from the supply and in a second position cut off the supply and permit discharge. The isolation of material must be accompanied by the motion of the trap chamber relative to the supply, and the trapped material must be either discharged or made accessible for use. The isolation may be accomplished by the travel of the trap chamber beyond a wall of a casing or supply container, by removal beyond the point where the angle of repose of the material in the supply is established, preventing further flow into the trap chamber, or by raising the chamber above the level of the material in the supply container.

(2) Note. Many conveyor type or movable trap chambers are provided for in preceding subclasses in other combinations, some of these being specially noted below.

(3) Note. Movable trap chamber structures (designated as segregating chambers) may be found in Class 221, Article Dispensing. In many instances the structure and mode of operation is entirely similar. A statement of the line between the classes, outlining the specific disposition of the art, is included in Lines With Other Classes and Within This Class, in the Class definition of Class 221.

SEE OR SEARCH THIS CLASS, SUBCLASS:

135+, for conveyor type of movable trap chambers where there are plural sources, compartments, receptacles and/or with spaced jacket, not serially arranged in the dispensing path.

160+, where the supply receptacle is movably mounted.

216+, where an agitator receptacle or ejector operates to remove material from the trap chambers.

226+, where there is a serially precedent agitator.

252+, where there are plural conveyor type or movable trap chambers or combinations with other discharge assistants.

282+, where there is discharge volume varying means.

332, where there is a vent passage.

336+, where there is a biasing means.

425+, which have nonmovable trap chambers (i.e., trap chambers which do not require motion to trap material, though they may be movable for mere adjustment purposes) and which have valves or other cut-offs to control inflow of material from a source and/or discharge of material. Chambers having movable wall parts which perform a definite material conveying (translating) motion are in subclass 344 and indented subclasses, as are chambers which move and substantially completely surround the trapped material, as distinguished from chambers which are stationary and merely have valves or other cut-off elements which move to permit entry and/or discharge of material from the trap chamber.

SEE OR SEARCH CLASS:

73, Measuring and Testing, subclasses 217 through 226, for tank type volume or rate of flow meters.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 110+ and 358 for devices including scoop, drawer, or tube type devices which must be removed from the supply container for discharge of material therefrom.

184, Lubrication, subclasses 61+ for conveyor type lubricators.

221, Article Dispensing, subclasses 263+ for article dispensing devices having movable segregating chamber structures. See (3) Note, above.

345 This subclass is indented under subclass 344. Dispensers in which either (1) the supply container wall adjacent the trap inlet is modified to level or strike off surplus material in the trap chamber as it moves away from the bulk of material, or (2) in which an attachment is provided for this purpose.

SEE OR SEARCH THIS CLASS, SUBCLASS:

80, for cutter combinations, and see the Note referring to this subclass (345) for the line.

108+, for drip, leakage, or waste catching or disposal including return of same to the supply.

148+, for cleaning means for dispenser parts other than discharge assistants see Note 1 stating the line.

216+, for agitators or ejectors for removing material from movable trap chambers.

342, for scrapers or wipers for or carried by a discharge assistant.

SEE OR SEARCH CLASS:

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 218+ for a molding machine for nonmetals with means for striking off excess stock material from a mold inlet.

346 This subclass is indented under subclass 345. Dispensers having striking or clearing means located within the supply container but removed from the point where the material separated by the conveyor trap leaves the bulk of the material.

347 This subclass is indented under subclass 345. Dispensers having unitary or interconnected striking or clearing means operable both at the point where the movable trap chamber leaves the supply chamber and where it re-enters.

(1) Note. Some of these are for use with plural oppositely acting trap chambers which are not claimed.

348 This subclass is indented under subclass 345. Dispensers having the striking or clearing means made up of relatively movable sections each cooperating with a portion of the trap chamber pathway.

349 This subclass is indented under subclass 345. Dispensers having the striking or clearing means either movably mounted or formed of yieldable material to be movable from its normal position.

(1) Note. This is usually to allow the passage of pieces of material too large to be received in the trap chambers or which for other reasons are caught between the striking or clearing means and the moving trap chamber element.

350 This subclass is indented under subclass 349. Dispensers having pivoted striking or clearing means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

223, for this subject matter combined with a pivoted ejector to remove material from movable trap chambers.

351 This subclass is indented under subclass 349. Dispensers having nonpivoted striking or clearing means movable in its own plane toward and from the trap chamber element.

SEE OR SEARCH THIS CLASS, SUBCLASS:

314, for discharge controllers adjustable to vary discharge volume mounted for similar motion.

352 This subclass is indented under subclass 349. Dispensers having a striking or clearing means comprising a brushlike structure.

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning, for brushes used in other combinations and for brush structure, per se.

353 This subclass is indented under subclass 344. Dispensers in which the flow from the main receptacle to the movable trapping chamber is (1) of the barometric control type, or (2) is of the type where solid material in the trapping chamber builds up to its angle of repose and stops flow from the main chamber.

SEE OR SEARCH THIS CLASS, SUBCLASS:

437, for nonmovable barometric or angle of repose trap chambers with means to adjust the cut-off point to vary the volume trapped.

457, for miscellaneous combinations between a supply and a barometric or angle of repose trap chamber, and see the notes for related art.

479, for containers having plural, coterminous openings (usually tubular spouts), many of which are disclosed as operating on a barometric principle when used to deliver to an unclaimed receptacle.

354 This subclass is indented under subclass 344. Devices in which there is a cut-off for either or both the inlet to the trap chamber or the outlet from the trap chamber, which is carried by the trap chamber element to move therewith and also so mounted and operated as to move relative to the trap chamber element.

SEE OR SEARCH THIS CLASS, SUBCLASS:

355, for trap chamber operated cut-offs, not carried by the trap chamber.

425+, for cut-offs associated with trap chambers other than the movable type.

355 This subclass is indented under subclass 344. Devices in which there is a cut-off for a material passage which is interconnected with the trap chamber or its operating means to be caused to assume its open or closed position upon operation of the trap chamber.

(1) Note. The interconnection may be merely that some element carried by the trap chamber engages the cut-off to operate it due to trap chamber motion.

SEE OR SEARCH THIS CLASS, SUBCLASS:
354, for trap chamber carried cut-offs.

356 This subclass is indented under subclass 344. Dispensers in which the trap chamber, other than the rotary or endless belt types, is dipped below the surface of the contents of the chamber for filling and is raised to a position with its inlet above the surface before discharge.

(1) Note. See Lines With Other Classes and Within This Class, Dipping and Sampling, in the main class definition for notes on related dipping and sampling art in other classes.

SEE OR SEARCH THIS CLASS, SUBCLASS:
367+, for similarly operating rotors.
371, for similarly operating endless belt carried chambers.

SEE OR SEARCH CLASS:
141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 110+ and 358 for devices including those of chamber form for obtaining material from a supply container and completely separable therefrom for discharge.

357 This subclass is indented under subclass 356. Dispensers in which the trap chamber has motion about a plurality of axes or has other combined motions.

SEE OR SEARCH CLASS:
221, Article Dispensing, subclass 262 for article dispensers having discharge assistants (including trap chamber structures) having compound motions.

358 This subclass is indented under subclass 356. Dispensers in which the trap chamber moves about a single axis eccentric to the center or axis of such chamber.

SEE OR SEARCH THIS CLASS, SUBCLASS:
367+, for dipping rotors.

359 This subclass is indented under subclass 344. Dispensers in which the actuating means is so connected to the conveyor type or movable trap chamber as to move relative thereto when operated.

SEE OR SEARCH THIS CLASS, SUBCLASS:
177, for dispensers having ambulant supporting means and means interconnected with a ground engaging wheel to operate a dispensing means.
179, for dispensers having pedal operated dispensing means.
333+, and see the notes thereto for motor operated movable dispensing parts.
336+, for combinations involving biasing means.
505+, for movable nozzles, valves, closures, etc., with relatively movable actuating means.

360 This subclass is indented under subclass 359. Dispensers in which the relatively movable actuating means imparts step-by-step rotary motion to the conveyor type or movable trap chamber.

SEE OR SEARCH THIS CLASS, SUBCLASS:
367+, for other rotary conveyor type trap chambers and see the notes thereto.

361 This subclass is indented under subclass 344. Dispensers in which the movable trap chamber or trap forming elements are reciprocated between supply and discharge positions to control the material flow and transport the trapped material relatively to the supply container.

(1) Note. In the case of two rigidly connected reciprocating trap-forming members the passage from the supply container to the dispenser outlet must cooperate with the members to prevent continuous flow in the normal and intended operation of the dispenser.

SEE OR SEARCH THIS CLASS, SUBCLASS:
137, for combinations involving plural sources, compartments or receptacles.
164+, for tilting supply containers.

216+, for combinations with an agitator or ejector to remove material from the trap chamber.
233+, and 243+, for combinations with a precedent, serially arranged agitator.
275+, for plural devices arranged in sets.
282+, for combinations with discharge volume varying means.
336+, for combinations with biasing means.
356+, for nonreciprocating dipping trap chamber type.
409, for reciprocating discharge assistants not of trap chamber type.
559+, and see the notes thereto for reciprocable flow controllers or closures.
583, for a dispensing inkwell including a movable trap chamber which is a dip well immersible in the supply for filling and elevatable to a position accessible to a penpoint.

362 This subclass is indented under subclass 361. Dispensers in which the trap chamber element is pivoted to move about an axis.

(1) Note. For the most part, the axis is eccentric to the center or axis of the trap chamber or plural trap chamber assembly, but may be coaxial therewith where there are means restricting the same to oscillation.

SEE OR SEARCH THIS CLASS, SUBCLASS:
367+, for trap chambers which are pivoted to rotate about their own axis and for plural trap chambers radially disposed about a common axis, where the trap chamber is capable of continuous rotation in the same direction.

363 This subclass is indented under subclass 362. Dispensers in which the pivoted trap chamber has a single opening which serves both as an inlet and outlet.

SEE OR SEARCH THIS CLASS, SUBCLASS:
366, for other single inlet-outlet reciprocating trap chambers.
368+, for rotary trap chambers with single inlet-outlet.
444, and see the notes thereto for other trap chambers having single inflow-outflow passages.

SEE OR SEARCH CLASS:
221, Article Dispensing, subclass 266 for article dispensers having movable trap chamber structures of the single inlet-outlet type.

364 This subclass is indented under subclass 363. Dispensers having the pivot of the movable trap lying in the trap chamber rim.

SEE OR SEARCH THIS CLASS, SUBCLASS:
531+, for related movable discharging guide structures not having material trapping features.

365 This subclass is indented under subclass 361. Dispensers having the trap forming members consisting of a stem connecting the central portions of bodies capable of filling the chamber to close off the material holding part.

SEE OR SEARCH THIS CLASS, SUBCLASS:
453, for stems having cut-off enlargements thereon which do not function to convey (shift) the material.
476, for spaced alternately seated cut-offs for a single outlet.

366 This subclass is indented under subclass 361. Dispensers in which the trap chamber has a single passage for both filling and discharging. The assembly may be inverted for discharge or the contents of the trap chamber are dipped out.

SEE OR SEARCH CLASS:
221, Article Dispensing, subclass 266 for article dispensers having movable trap chamber structure of the single inlet-outlet type.

367 This subclass is indented under subclass 344. Dispensers in which the movable trap chamber element is of the conveyor type and has a motion of rotation about its own axis or plural trap chambers are assembled to rotate about a common axis.

(1) Note. The trap chamber element has a generally circular periphery and may have one or more pockets, the axis being the center of the unit as a whole.

SEE OR SEARCH THIS CLASS, SUBCLASS:

138+, for combinations involving plural sources, compartments, or receptacles.
167+, for rotatable supply receptacles.
216+, for combinations with an agitator or ejector to remove material from the supply container.
233+, and 236+, for combinations with a precedent, serially arranged agitator.
264, and 271+, for plural such devices.
282+, for combinations with discharge volume varying means, particularly 293+.
336+, for combinations with biasing means.
356+, for dipping trap chamber type which are nonrotary.
360, for rotary devices having a relatively movable actuator for imparting intermittent motion.
362+, where means are provided to require oscillation.
410+, for rotary discharge assistants not of the trap chamber type.
452, for rigidly connected rotary valves for controlling the inlet and outlet of a trap chamber, but not forming a complete enclosure for the trapped material, so as to constitute a conveyor type trap chamber.
548+, and see the notes thereto for rotary closures.

SEE OR SEARCH CLASS:

48, Gas: Heating and Illuminating, subclasses 48+, for rotary carbid feeders.
73, Measuring and Testing, subclasses 217+ for volume or rate of flow meters of the rotary tank or bucket type.
184, Lubrication, subclass 63, for rotary bucket conveyors.
198, Conveyors: Power-Driven, appropriate subclasses for rotary conveyors, including 441, 450, 469.1+, 608, 611+, and 803.16.
406, Conveyors: Fluid Current, subclasses 63+ for those having feeders having pockets which successively register with the conveyor.
417, Pumps, appropriate subclasses for rotary pumps.
418, Rotary Expansible Chamber Devices, for rotary expansible chamber type pumps.

368 This subclass is indented under subclass 367. Dispensers in which the trap chamber or each trap chamber of the group has a single opening which serves both for inlet from the supply and for discharge.

SEE OR SEARCH THIS CLASS, SUBCLASS:

363+, and 366, for oscillating and reciprocating trap chambers with single inlet-outlet.
444, and see the notes thereto for other trap chambers having single inflow-outflow passages.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 266 for article dispensers having movable trap chamber structure of the single inlet-outlet type.

369 This subclass is indented under subclass 368. Dispensers having the chamber or chambers arranged so that the outlet-inlet is positioned radially, forming a scoop or bucket.

370 This subclass is indented under subclass 367. Dispensers in which the trap chamber has both an inlet and an outlet both of which are axial, i.e., material passes through the trap chambers along a path parallel to the axis of rotation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

302, for such trap chambers comprising axially adjustable rotor parts each having axial material trap sections.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 265 for article dispensing devices having rotary trap chamber structures of the axial inlet and outlet type.

371 This subclass is indented under subclass 344. Dispensers having trap chambers carried by or formed in or by an endless belt or belt elements.

SEE OR SEARCH THIS CLASS, SUBCLASS:

415, for endless belt dispensers without trap chambers.

SEE OR SEARCH CLASS:

48, Gas: Heating and Illuminating, subclass 49, for endless belt carbid feeders.

184, Lubrication, subclass 62.

198, Conveyors: Power-Driven, for endless belt conveyors.

372 This subclass is indented under subclass 251. Dispensers in which a supply container delivers to a casing which casing houses a discharge assistant (such as an impeller, piston, follower, etc.) which assists in discharge of material from the casing.

(1) Note. This subject matter occurs in many preceding subclasses in special embodiments or in other combinations.

(2) Note. In the subclasses following this group are patents for supply containers having discharge assistants (not associated with a casing) operating directly on the material in the supply container.

SEE OR SEARCH THIS CLASS, SUBCLASS:

95, where the supply container is of the collapsible wall type.

129+, where there are plural sources, compartments, or receptacles and/or a spaced jacket, where the additional compartment or receptacle is other than a casing which houses the discharge assistant and receives material from the source.

205, for combinations in which a supply container has a discharge assistant associated therewith for delivery of material to a trap chamber having no discharge assistant.

252+, and see the notes thereto for plural discharge assistants including those in which a discharge assistant is associated with the supply container to deliver material to the casing which houses a second discharge assistant.

320+, where a movable nozzle is connected to the discharge assistant in the casing.

324, where a handle for the combination is claimed.

335, where a source of supply under pressure (the pressure creating means not being claimed) operates a discharge assistant.

336, where the discharge assistant is biased to move by spring or other means.

SEE OR SEARCH CLASS:

92, Expansible Chamber Devices, appropriate subclasses for an expansible chamber device comprising a piston and cylinder. See Lines With Other Classes and Within This Class, in the class definition of Class 92, under "SEARCH CLASS 222", for a statement of the line between Class 92 and Class 222.

137, Fluid Handling, subclasses 565.01+ for distribution systems including a pump.

169, Fire Extinguishers, subclass 33 for portable fire extinguishers with pumps, 72+ for gas pressure vessels having discharge assistance.

184, Lubrication, subclasses 64+ for lubricators using pumps.

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 88+, 124+, 157, 319, and 329+ for combinations of pumps with spray apparatus or spray nozzles.

366, Agitating, particularly subclass 196 for discharge effected by a stirrer, and subclasses 262+ for a pump type stirrer.

417, Pumps, for pump structure.

418, Rotary Expansible Chamber Devices, for rotary expansible chamber pumps.

604, Surgery, subclasses 131+ for pressure devices; subclasses 151+ for pumps and subclasses 218+ for pistons.

373 This subclass is indented under subclass 372. Dispensers in which the casing which receives material from the supply container by gravity is fed fluid under pressure to cause discharge therefrom.

SEE OR SEARCH THIS CLASS, SUBCLASS:
394+, and see the notes thereto for related art.
630+, for fluid flow discharge.

375 This subclass is indented under subclass 372. Dispensers having (1) means to prevent leakage from the discharge passage, (2) means to prevent siphoning following operation of the discharge assistant and (3) means to insure a full stroke of the pump mechanism.

(1) Note. Pressure relief devices, as valves or expansion chambers, are included in the Class Definition.

SEE OR SEARCH THIS CLASS, SUBCLASS:
72, for volume or rate of flow metering with by-pass, gas separation and/or anti-siphon means.
73, for volume or rate of flow metering with means for relieving or maintaining hose pressure.
108+, for means for catching or disposing of leakage, drip, or waste, including those which also return the same to the supply.
318, for means for by-passing a discharge assistant and/or for returning material from the discharge side thereof to the supply.
424, for miscellaneous dispensers having means to return material to the supply.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 215+ for back flow or siphon preventing in fluid handling systems.
221, Article Dispensing, subclass 245 for article dispensing devices having return stroke inhibiting means (full stroke-mechanism).
251, Valves and Valve Actuation, subclass 34 for reverse flow prevention in fluid pressure type servo-motor valve actuators.

376 This subclass is indented under subclass 372. Dispensers in which there is structure providing for the inlet of material from the supply container to the discharge assistant casing from at least two spaced points.

(1) Note. This may be by providing plural inlet pipes or a single inlet pipe which may move from place to place within the dispenser due to flexibility or joints or any other means or which may have plural openings.

(2) Note. Inlets connected with pump pistons or movable pump cylinders to move therewith are here.

SEE OR SEARCH THIS CLASS, SUBCLASS:
381, for movable discharge assistant casings which do not position the inlets at plural points.

377 This subclass is indented under subclass 372. Dispensers in which the inlet to the discharge assistant casing extends into a supplemental or trap chamber communicating with the supply chamber.

(1) Note. The trap chamber may be formed by baffles or walls within the supply chamber, or by a depression in the bottom wall (including conical bottom walls).

(2) Note. These are for two general purposes, i.e., (1) to be able to substantially completely exhaust the supply, and (2) to be able to trap a small amount about the force feeder inlet so as to be able to dispense same even though the main body of the supply is not about the inlet due to tipping of the dispenser.

SEE OR SEARCH THIS CLASS, SUBCLASS:
328, for material discharge guides on container side of the outlet.

378 This subclass is indented under subclass 372. Dispensers in which the discharge assistant, the actuating means therefor, the supply container and the nozzle are arranged substantially coaxially.

SEE OR SEARCH THIS CLASS, SUBCLASS:

259, and 260+, for similar arrangements involving more than one discharge assistant.

321.1+, for similar arrangements where a movable nozzle is connected to the discharge assistant.

510, for containers having an outlet element in one wall and the actuator therefor passing through the container interior and another wall.

379 This subclass is indented under subclass 372. Dispensers in which the dispenser outlet is telescopic and/or the inlet to the discharge assistant casing is telescopic.

SEE OR SEARCH THIS CLASS, SUBCLASS:

398, for fluid pressure type dispensers having telescopic supply containers or outlets.

523, for miscellaneous telescopic outlets.

380 This subclass is indented under subclass 372. Dispensers in which the dispenser outlet has a valve therein.

SEE OR SEARCH THIS CLASS, SUBCLASS:

375, for anti-leak or anti-siphon means.

387, for follower type dispenser with valved outlet.

544+, and see the notes thereto for dispensers with valved outlets.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclasses 247+ for article dispensing devices having ejector means and relatively movable outlet elements associated therewith.

381 This subclass is indented under subclass 372. Dispensers in which the discharge assistant casing is movable.

SEE OR SEARCH THIS CLASS, SUBCLASS:

376, for movable casings which position the inlet at plural points.

382 This subclass is indented under subclass 372. Dispensers in which there is a pipe communicating with and constituting an extension of the inlet to the discharge assistant casing and extending internally of the receptacle. For the most part these pipes extend to adjacent the receptacle bottom.

SEE OR SEARCH THIS CLASS, SUBCLASS:

211, for this structure associated with resilient wall dispensers.

376, where there are plural such pipes, or where a single such pipe is movable for plural point inlet.

377, for such pipes associated with an inlet trap.

464.1+, for miscellaneous dispensers having such outlet pipes.

383.1 Container-mounted pump:
This subclass is indented under subclass 372. Subject matter wherein the encased discharge assistant is a pump, which is mounted on the supply container.

SEE OR SEARCH THIS CLASS, SUBCLASS:

382, for a pump or pulsator mounted on a supply container and having an internally extending pipe constituting an extension of the pump or the pulsator inlet.

383.2 Rotary pump:
This subclass is indented under subclass 383.1. Subject matter wherein a working member of the pump undergoes a rotary motion.

SEE OR SEARCH CLASS:

418, Rotary Expansible Chamber Devices, for rotary pump.

383.3 Movable material discharge guide:
This subclass is indented under subclass 383.1. Subject matter in wherein there is associated with the pump a material discharge guide which is so constructed as to be movable rela-

tive to the pump for the purposes other than mere attachment or detachment.

SEE OR SEARCH THIS CLASS, SUBCLASS:

74+, for a hose or other movable discharge guide interlocks and interconnection.

83, for a nozzle or other material guide that has a cutter or punch associated therewith and is mounted for motion.

160+, where the dispensing container is mounted for motion.

257+, for combination of a follower and a casing enclosed impeller, at least one of them being interconnected with a movable nozzle.

320+, for a movable nozzle interconnected with a single discharge assistant.

461, for a funnel type outlet movably interconnected with a container.

507, for an annular outlet surrounding discharge guide which is movable and constitute an actuator for a second movable outlet element.

522+, for an axially slidable tube, sleeve, or apertured cap.

526+, for a movable material discharge guide.

567+, for a nozzle, spout and pouring device having a separable means for mere attachment and detachment purposes.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 615+ for an articulated or swinging flow conduit in a distribution system.

251, Valves and Valve Actuation, subclasses 149+, 150, 341+, and 349+ for other moving flow pipe section or spout.

291, Track Sanders, subclass 31 for a flexible or movable pipe operable to cutoff the sand feed.

384 Dispensers under subclasses 383.1+ in which means is provided for holding or preventing motion of the pump or pulsator piston.

SEE OR SEARCH THIS CLASS, SUBCLASS:

309, for similar means for adjusting discharge volume.

402, for similar means for holding the piston of a fluid pressure generating pump or pulsator.

385 Dispensers under subclasses 383.1+ in which the casing or cylinder of the pump or pulsator is within the supply container.

386 This subclass is indented under subclass 251. Dispensers in which there is an element acting as a supply container wall which follows the material as it is dispensed.

(1) Note. The follower may be caused to move by atmospheric pressure only, or there may be means associated therewith to cause motion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

95+, for collapsible wall dispensers.

205, where the material ejected from the supply container by the follower is delivered to a trap chamber having no discharge assistant.

206+, for resilient wall dispensers.

252+, for combinations with other discharge assistants.

320, for followers connected to movable nozzles.

323+, for follower type dispensers having handles for handling the organization.

326+, for insertable cartridge or removable container combinations.

333+, for motor for biased followers.

336+, for baised Followers.

372+, for casings having followers, there being a supply container to deliver to the casing.

SEE OR SEARCH CLASS:

92, Expansible Chamber Devices, appropriate subclasses for an expansible chamber device comprising a piston and cylinder, and particularly subclasses 172+ for a piston, per se, even though disclosed as a follower for a dispenser.

100, Presses, subclasses 179+ for presses not elsewhere classified in which a plunger forces material through a constricted tubular casing.

137, Fluid Handling, subclass 205.5 and 564.5 for fluid handling systems in

which there is a follower type discharge assistant for the material in a receptacle to be mixed in a flowing liquid.

169, Fire Extinguishers, subclass 33 for portable fire extinguishers with followers.

184, Lubrication, subclasses indented under "Follower" starting with subclass 37.

220, Receptacles, subclasses 578+ for a closure-like member which rests on the unused contents of a container.

221, Article Dispensing, subclasses 279+ for article dispensing devices having follower members included therein, and see also subclasses 56+ for dispensers for flexible articles having followers, and subclasses 226+ for article dispensers of general types having plural discharge assisting means one of which is a follower means.

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 23, 313 and 320+ for spaying apparatus in which the fluid is discharged by means of a follower type discharge assistant.

401, Coating Implements With Material Supply, subclasses 171+, wherein the implement has a cylindrical wall reservoir for the material and a piston movable relative to the wall to force the material from the reservoir.

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclass 87 for shaping apparatus of the caulking gun type having a molding material supply and means shaping a deposited material in plural dimensions.

604, Surgery, subclasses 218+ for pistons or plungers expelling material from reservoirs.

386.5 This subclass is indented under subclass 386. Dispensers in which the follower member is of a nonrigid (flexible or resilient) material.

(1) Note. Outer receptacle wall structure is not considered to be a follower and structures wherein a collapsible or resilient outer wall follows the material being dispensed are not included in this subclass. For such devices, see subclasses 92+ of this class.

SEE OR SEARCH THIS CLASS, SUBCLASS:

92+, for collapsible wall type containers, and particularly subclasses 95+, for such containers in combination with wall collapsing means therefor. See (1) Note.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 564.5 for nonrigid type followers in fluid handling systems.

239, Fluid Sprinkling, Spraying, and Diffusing, subclass 323 for nonrigid followers in spraying systems.

387 This subclass is indented under subclass 386. Dispensers in which (1) the outlet is valve controlled, (2) the nozzle or other discharge guide is movable relative to the dispenser, and/or (3) means are provided for venting gas from the material side of the follower.

SEE OR SEARCH THIS CLASS, SUBCLASS:

320, for movable nozzles connected to the follower.

380, for valved outlets for casing enclosed discharge assistants which receive material from a supply.

526+, and see the notes thereto for movable discharge guides.

544+, and see the notes thereto for other dispensers with flow controllers or closures.

388 This subclass is indented under subclass 386. Dispensers having an opening in the side wall of the container through which the container is refilled.

SEE OR SEARCH THIS CLASS, SUBCLASS:

327, where a cartridge or container with a follower is removable from and insertable into the dispenser organization.

389 This subclass is indented under subclass 386. Dispensers in which the follower is operated by fluid under pressure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

258, 261 and 262, for combinations with other discharge assistants.

386.5, for dispensers having nonrigid followers which are operated by fluid under pressure.

394+, and see the notes thereto for related art.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 564.5 for a follower type feeder responsive to a main line flow in a fluid handling system.

184, Lubrication, subclasses 39+.

390 This subclass is indented under subclass 386. Dispensers in which the follower is operated by a screw mechanism.

SEE OR SEARCH CLASS:

239, Fluid Sprinkling, Spraying, and Diffusing, subclass 324 for screw type followers for the fluid in a spraying system.

401, Coating Implements With Material Supply, subclasses 172+, wherein the implement has a cylindrical wall reservoir for the material and a piston movable relative to the wall by screw means to force the material into the reservoir or from the reservoir to the applying tool.

604, Surgery, subclass 224.

391 This subclass is indented under subclass 386. Follower type dispensers in which the operating means for the follower involves an intermittent grip type mechanism.

SEE OR SEARCH CLASS:

74, Machine Element or Mechanism, subclasses 111+, for intermittent grip mechanisms, per se.

128, Surgery, subclass 236.

392 This subclass is indented under subclass 386. Follower type dispensers in which there is either or both (1) a follower in the form of a ribbon, (2) a strand for operating a follower of any form.

393 This subclass is indented under subclass 386. Dispensers in the form of scoops with followers.

SEE OR SEARCH CLASS:

30, Cutlery, subclasses 128+ for cutlery (including spoons) with ejectors or strippers.

294, Handling: Hand and Hoist-Line Implements, subclasses 50+ for fork and shovel clearers, and subclass 55 for scoops.

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 282+ for a scoop type shaping means (e.g., ice cream dishes, etc.), having means to release a product therefrom.

394 This subclass is indented under subclass 251. Dispensers in which the material is caused to discharge from the container by fluids under pressure that directly contact the material to be dispensed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

3+, for gas or vapor dispensers.

51, for float level indicators.

61+, for automatic control of fluid pressure discharge type of dispenser.

64+, for material level controls.

95, for fluid pressures used to collapse the walls of receptacles.

152, for inert atmosphere providing means where the gas pressure does not operate to cause material discharge.

195, for gas agitation.

204, for siphons combined with discharge assistants.

206, for resilient wall dispensers.

258, 261, 262, and 263, where there is a second discharge assistant.

320+, where the gas pump piston rod is also the nozzle.

323+, for gas pumps located in the supply container handle.

333+, for motors including those operated by pressure fluids.

373, where fluids are applied to the material in a casing to cause discharge, the casing receiving material from a supply by gravity.

386.5, for fluid pressure operated, nonrigid followers.
389, for followers that are fluid pressure operated.
630+, for fluid flow discharge.

SEE OR SEARCH CLASS:
60, Power Plants, subclass 39.48, for combustion products power plants with fluid pressure feeding of oxidizer, fuel or water.
137, Fluid Handling, subclasses 206+ for fluid handling systems having gas displacement means as gas storage over liquid in a pressure system.
141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclass 19 for dispensers having a cutter or punch to open a gas pressure cell to deliver gas under pressure to the dispenser's container to force out the contents material.
169, Fire Extinguishers, subclass 9 and 71+
184, Lubrication, the subclasses indented under "Fluid operated" starting with subclass 49.
221, Article Dispensing, subclass 278 for article dispensing devices having fluid pressure discharge assisting means.
239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 22, 364+, 372, and 373 for spraying apparatus in which the discharge of one fluid is caused at least in part by the pressure of another fluid in contact therewith.
261, Gas and Liquid Contact Apparatus, for dispensers of the gas pressure discharge assistant type claimed in combination with means to secure an intimate contact between and/or a mixing of the gaseous medium and the fluid to be dispensed.
291, Track Sanders, subclasses 3 through 16, 18 for sanders operating by fluid pressure or fluid flow.
401, Coating Implements With Material Supply, subclasses 184+, wherein the implement includes a reservoir for the material and means to vary the pressure of the contained gas (usually air) so as to vary the pressure on the material to force the material into the reservoir or from the reservoir to the applying tool.
406, Conveyors: Fluid Current, subclass 146.
516, Colloid Systems and Wetting Agents; Subcombinations Thereof; Processes of Making, Stabilizing, Breaking, or Inhibiting, subclasses 1+ for continuous gas or vapor phase colloid system (e.g., smoke, fog, aerosol, cloud, mist) or agents for such systems or making or stabilizing such systems or agents, when generically claimed or when there is no hierarchically superior provision in the USPC for the specifically claimed art.
604, Surgery, subclasses 140+ for material impelled by pressurized charge or gas.

395 This subclass is indented under subclass 394. Dispensers having a liquid only disclosed as the pressure fluid.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclass 154 and 172 for diverse liquids in a pressure system.
184, Lubrication, subclasses 49 through 54.
604, Surgery, subclass 150 for material impelled by water or hydrant pressure.

396 This subclass is indented under subclass 394. Dispensers having means, such as pressure operated relief valves, to limit the maximum fluid pressure exerted on the contents.

SEE OR SEARCH THIS CLASS, SUBCLASS:
52+, if automatic control means (other than mere valves operated directly by pressure) are claimed.
397, for manually operated relief valves.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 171+ for fluid separating traps or vents in diverse fluid containing pressure systems.

397 This subclass is indented under subclass 394. Dispensers having means for discharging the pressure fluid from the container.

(1) Note. Such pressure fluid discharging means must be in addition to the pressure fluid introducing means and/or the dispenser outlet and/or their controls, even though such means may be disclosed as relief means.

SEE OR SEARCH THIS CLASS, SUBCLASS:
396, and see the notes thereto.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 171+ for fluid separating traps or vents in diverse fluid containing pressure systems.

398 This subclass is indented under subclass 394. Dispensers in which (1) the container is made of at least two telescopically related sections which are moved relative to each other to generate the fluid pressure which acts on the material to cause discharge, and/or (2) there is an outlet pipe having telescopically related sections.

SEE OR SEARCH THIS CLASS, SUBCLASS:
379, for telescopic outlets associated with a supply container having a casing enclosed discharge assistant.
523, for miscellaneous telescopic outlets.

399 This subclass is indented under subclass 394. Dispensers having a reservoir separate from but communicating with the container whose contents are to be dispensed, which reservoir contains gas under pressure which is fed to the material container to cause dispensing.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 209+ for gas maintenance or application in gas storage over or displacement of liquid in a diverse fluid containing pressure system.

400.5 This subclass is indented under subclass 394. Dispensers in which the operator for the material outlet valve is so related to a fluid pressure generating pump or pulsator that manipulation of the operator causes operation of the pump or pulsator.

400.7 This subclass is indented under subclass 394. Dispensers in which the fluid pressure inlet and the material discharge outlet element have a common mounting adapted for manipulation as a unit for positioning on or removal from a container.

SEE OR SEARCH THIS CLASS, SUBCLASS:
399, for similar structures in which a gas reservoir is connected to the fluid pressure inlet.
400.5, for similar structures also including interconnected operating means for the outlet and for a fluid pressure generating pump or pulsator.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclass 212 for unitary mounting for gas inlet and fluid outlet in a diverse fluid containing displacement type pressure system.

400.8 This subclass is indented under subclass 400.7. Dispensers in which there is a fluid pressure generating pump or pulsator associated with the fluid pressure inlet.

401 This subclass is indented under subclass 394. Dispensers in which a fluid pressure generating pump or pulsator is mounted on the container whose contents are to be dispensed, or is adapted to be so mounted.

SEE OR SEARCH THIS CLASS, SUBCLASS:
209, where the pump or pulsator has a resilient wall.
383.1+, for pumps and pulsators mounted on a supply container to receive therefrom material to be dispensed.
400.5, for such devices where the pump actuator also operates an outlet valve.
400.8, where the pump is mounted on the same element as the material discharge outlet and movable therewith to and from operative position on the container.

402 This subclass is indented under subclass 401. Dispensers provided with means for securing the fluid pressure generating pump or pulsator in one position whereby operation is precluded.

(1) Note. Many of these devices are inter-engaging means on the piston rod and some part stationary relative to the container, so that the inter-engaged parts assist in removing the pump from the container. The piston rod handle may serve in its secured position as a handle for the supply container.

SEE OR SEARCH THIS CLASS, SUBCLASS:

384, for pumps and pulsators having such means and mounted on a supply container to receive therefrom material to be dispensed.

402.1 This subclass is indented under subclass 394. Dispensers in which a valve closing an opening for material under fluid pressure is opened by motion, relative to a wall of the container holding the material, of an actuator which is either (1) a tubular flow guide through which the material passes from the opening toward discharge or (2) a member moving inwardly of the container through the opening.

SEE OR SEARCH THIS CLASS, SUBCLASS:

322, for dispensers with discharge assistants in which an actuator for a movable dispenser part projects through the final dispenser outlet discharging to the atmosphere.

SEE OR SEARCH CLASS:

169, Fire Extinguishers, subclasses 71+ for devices of that class adapted to be transported by an operator to the fire and comprising a container for an extinguishing agent and gas pressure means for causing the discharge of the agent at the wall of the operator.

402.11 This subclass is indented under subclass 402.1. Dispensers having means for rendering the valve actuator inoperable.

SEE OR SEARCH THIS CLASS, SUBCLASS:

153.01+, for dispensers with locks or seals.

182, for dispensers with covers barring access to the actuator.

402.12 This subclass is indented under subclass 402.1. Dispensers having means associated with the opening through which the dispensed material discharges to the atmosphere to protect the material at the opening from exposure to the atmosphere when not dispensing.

402.13 This subclass is indented under subclass 402.1. Dispensers having a cover which grips the container and encloses the portion of the end wall of the container on which the valve is mounted with such cover having an opening through which discharging material passes and means by way of which the valve is actuated to open.

SEE OR SEARCH THIS CLASS, SUBCLASS:

182, for dispensers with enclosing covers that may be removed to expose the actuating parts of the dispenser discharge means.

402.14 This subclass is indented under subclass 402.1. Dispensers having means for maintaining the valve in open position after the actuator which opened it has discontinued its opening movement.

(1) Note. The opening of the outlet valve may be due to human finger pressure and the dispensers in this subclass may have means to relieve the need for holding the valve open by the finger when continuous dispensing is desired.

402.15 This subclass is indented under subclass 402.1. Dispensers having a lever mounted or mountable on the container which can be actuated to move the valve actuator.

SEE OR SEARCH THIS CLASS, SUBCLASS:

70, for dispensers with timing devices which may have a lever in the system for actuating the dispenser.

402.13, for pressurized dispensers with overcaps which may have a lever-like portion to actuate the outlet valve.

402.16 This subclass is indented under subclass 402.1. Dispensers in which there is a flow path provided for fluid entering the container and such flow path is, at least in part, other than a flow

path along which the material moves toward discharge in dispensing.

(1) Note. Disclosures of filling by mere reverse flow along the dispensing flow path are classified according to the dispensing structure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

400.7+, for fluid pressure dispensers under subclass 394 having a fluid pressure inlet and a material discharge outlet element in a common mounting adapted for manipulation as a unit for positioning on or removal from a container.

402.17 This subclass is indented under subclass 402.1. Dispensers in which there are available alternative flowpaths for the material to move along toward discharge and there is a means outside the container which can be moved relative to the container for electing the flowpath to be used in dispensing.

402.18 This subclass is indented under subclass 402.1. Dispensers in which the material passes to the valve which closes the opening through a duct which has an entrance for the pressure fluid as well as one for the material and these entrances are spaced apart.

SEE OR SEARCH THIS CLASS, SUBCLASS:

402.19, for dispensers in which there are separate openings in the duct to the outlet valve and such openings are used alternatively for the material dispensed.

402.19 This subclass is indented under subclass 402.1. Dispensers having a separate flowpath entrance for material going to the valve at each end of the container and means to cause a flowpath entrance which is closed in one position of the container to be open when the container is turned over.

SEE OR SEARCH THIS CLASS, SUBCLASS:

402.11, for dispensers which disable actuation of the outlet valve when the container is not appropriately oriented to dispense material.

402.18, for separate openings in the duct going to the outlet valve one opening being for gas propellant and the other for the material dispensed.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 38+ for fluid handling devices controlled by change of position of the system particularly subclass 43 for vent opening or closing by the change.

402.20 This subclass is indented under subclass 402.1. Dispensers having a chamber in which material for discharge next is separate from the supply of material in the container between serially alternately open elements for closing the outlet flowpath.

(1) Note. See Lines With Other Classes and Within This Class, Stationary Traps, in the definition of this class (222) and the notes thereto as to the inclusion of trap chamber devices in this class and in other classes.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 627.5 for fluid handling systems with sequentially closing and opening alternately sealing flow controllers.

402.21 This subclass is indented under subclass 402.1. Dispensers in which moving the flow guide laterally through an angle relative to the container opens the outlet flowpath.

SEE OR SEARCH CLASS:

239, Fluid Sprinkling, Spraying, and Diffusing, subclass 577 for a spray means having an unhinged tilting type valve in the flow line.

251, Valves and Valve Actuation, subclass 149.8 for valves in which the closing element is operated as a result of imparting motion to the flowpath, and subclasses 349+ for valves in which the valve actuator is an inlet or outlet means for material passing through the valve.

402.22 This subclass is indented under subclass 402.21. Dispensers in which the flow guide which is angularly moved to open the valve comprises a tube with a closed inner end, the tube plugging a hole in the container wall, and having a radially outwardly extending flange fixed to the tube and surrounding it within the container and seating against a surface adjacent the hole to control flow of the material from the container into the tube.

402.23 This subclass is indented under subclass 402.21. Dispensers in which the valve has a stem portion which extends into the flow guide and the angular motion of the flow guide causes the stem to move the valve to open position.

SEE OR SEARCH THIS CLASS, SUBCLASS:

402.25, where a stem is pushed through the valve outlet and not actuated by the nozzle.

402.24 This subclass is indented under subclass 402.1. Dispensers in which the discharge guide in moving to open the valve either slides inwardly through an annular member fitting the discharge guide circumferentially or deforms an annular closure member surrounding the outlet flowpath.

SEE OR SEARCH THIS CLASS, SUBCLASS:

402.2, for fluid pressure dispensers in which the valve is opened by a discharge guide sliding inwardly through an annular member and having a lock trap chamber.

402.25 This subclass is indented under subclass 402.1. Dispensers in which the valve is opened by a member moved inwardly of the container through the opening, the material flowing along the outer surface of the member.

SEE OR SEARCH THIS CLASS, SUBCLASS:

322, for dispensers with discharge assistants in which an actuator for a movable dispenser part projects through the final dispenser outlet discharging to atmosphere.

402.23, for dispensers in which a valve stem extends through the valve outlet and into the outlet nozzle and is actuated by moving the outlet nozzle laterally.

403 This subclass is indented under subclass 251. Dispensers which remove from the supply only the layer or film adhering to the discharge assistant surface.

SEE OR SEARCH THIS CLASS, SUBCLASS:

423, for miscellaneous film accumulating dispensers.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 110+ for film accumulating devices which must be removed from the supply container for discharge.

404 This subclass is indented under subclass 251. Dispensers having a discharge assistant having more than one character of motion, either simultaneously or successively in the normal operation thereof (as rotating and reciprocating or reciprocating and swinging, etc.).

SEE OR SEARCH THIS CLASS, SUBCLASS:

229, for serially arranged devices, the first being an agitator, having axially rotary and longitudinal motion.

233+, where serially arranged devices, the first being an agitator, have different motions, one rotary and one reciprocating.

357, for dipping type trap chambers (other than rotary and endless belt types) having compound motions.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 262 for article dispensing devices having discharge assistants which have motion which is compound in character.

405 This subclass is indented under subclass 251. Dispensers having a discharge assistant which promotes discharge of the material that is uppermost in the supply container.

406 This subclass is indented under subclass 251. Dispensers having discharge assistants comprising members which occupy positions during discharge operations different from their normal or unstressed position.

(1) Note. The distortion may be caused by contact with the material or with the casing.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 260 for article dispensing devices having deformable discharging elements either forming a part of a discharge assistant or otherwise associated directly therewith.

407 This subclass is indented under subclass 406. Dispensers having the deformable elements urged by their own resilience or by spring or other means to normal or undistorted position.

SEE OR SEARCH THIS CLASS, SUBCLASS:

336+, for biasing means which actuate discharge assistants toward either discharging or nondischarging position.

408 This subclass is indented under subclass 251. Dispensers having means tending to convey or move material along a path adjacent a discharge point, and a means interposed in the path of material being moved to divert it from the conveyor means for discharge.

SEE OR SEARCH THIS CLASS, SUBCLASS:

290, for similar devices in which the diverting means is adjustable to vary the volume discharged.

344+, for conveyor type having trap chambers, and see the notes thereto for related art.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclasses 367+, 370.07 through 370.09, 370.1, 370.11 through 370.13, 426+, 463.1+, 497, 597+, 599, and 637 for means for moving an article or material off a conveyor.

406, Conveyors: Fluid Current, subclasses 79+, for endless circuit material conveyors from which material is removed by a fluid current conveyor.

408.5 This subclass is indented under subclass 251. Dispensers in which the discharge assistant is an agitator rigidly mounted on a movable closure of the supply receptacle, the rigid closure and agitator being movable relative to the receptacle. The closure may or may not have dispensing openings therein, and the opening which is closed is usually a filling opening.

SEE OR SEARCH THIS CLASS, SUBCLASS:

226+, for dispensers in which an agitator is rigidly mounted on a discharge controller which is operated in connection with discharge.

459, for agitators fixed relatively to the supply receptacle.

SEE OR SEARCH CLASS:

366, Agitating, appropriate subclasses, for agitators associated with hand manipulable shakers, and see the class definition of Class 366 for the line.

409 This subclass is indented under subclass 251. Dispensers having a reciprocating (including oscillating) discharge assistant.

SEE OR SEARCH THIS CLASS, SUBCLASS:

361+, and see the notes thereto for other reciprocable and oscillatable discharge assistants.

SEE OR SEARCH CLASS:

48, Gas: Heating and Illuminating, subclass 51, for acetylene generators with piston type carbid feed.

110, Furnaces, subclass 109, for hopper type fuel feeders with reciprocating pushers.

198, Conveyors: Power-Driven, subclasses 409, 429+, 468.01+, 517, 602, 614, 621.1+, 736+, and 750.1+ for reciprocating conveyors.

221, Article Dispensing, subclasses 268+ for article dispensers having reciprocating (including oscillating) discharge assisting means.

291, Track Sanders, subclasses 28+, 34, 35, and 36+, for reciprocating (including oscillating) sand feeders.

410 This subclass is indented under subclass 251. Dispensers having a rotary discharge assistant.

SEE OR SEARCH THIS CLASS, SUBCLASS:

367+, and see the notes thereto for other rotary discharge assistants.

SEE OR SEARCH CLASS:

48, Gas: Heating and Illuminating, subclasses 48+, for rotary carbid feeders.

198, Conveyors: Power-Driven, subclasses 642, for rotary thrower type and subclasses 441, 450, 469.1+, 608, 611+, and 803.16, for other rotary conveyors.

221, Article Dispensing, subclass 277 for article dispensing devices having rotary discharge assistants, and see the search notes thereto for other fields of search in Class 221 involving rotary discharge assisting elements.

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 665+, 668+, 672+, and 681+ for a device comprising a container for nonfluid material and a rotary scattering or strewing means to distribute the material over an extended area.

241, Solid Material Comminution or Disintegration, subclass 225 for rotary feeds to roll mills.

291, Track Sanders, subclass 32, for rotary sand feeders.

411 This subclass is indented under subclass 410. Dispensers having the discharge point at or near the axis of rotation of the discharge assistant.

SEE OR SEARCH THIS CLASS, SUBCLASS:

413, for discharge assistants in the form of a (solid shaft) screw with a terminal outlet.

412 This subclass is indented under subclass 410. Dispensers having a discharge assistant with helically arranged projections, either interrupted or continuous, e.g., screws.

SEE OR SEARCH THIS CLASS, SUBCLASS:

411, for hollow rotors having internal spiral projections, so that the discharge path lies axially of the rotor.

SEE OR SEARCH CLASS:

48, Gas: Heating and Illuminating, subclass 54 for screw carbid feeds.

100, Presses, subclasses 145+ for presses not elsewhere classified which concurrently compress and convey the material and in which the material is conveyed by a helix type compressor.

110, Furnaces, subclass 110 for furnace feeding hoppers having screw feed.

198, Conveyors: Power-Driven, subclasses 64 and subclasses 467.1, 513, 545, 548, 550.6, 550.10, 582, 608, 625, and 657+ for screw feeds.

241, Solid Material Comminution or Disintegration, subclasses 246+ for screw feeds to disk or cone mills.

291, Track Sanders, subclass 33 for screw feeds.

406, Conveyors: Fluid Current, subclasses 56+ for screw feeds.

413 This subclass is indented under subclass 412. Dispensers having the sole discharge point at or near the end of the screw.

414 This subclass is indented under subclass 410. Dispensers having the peripheral surface of the rotor in contact with the material to move the same, the material moving circumferentially of the rotor axis.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 259 for article dispensing devices having discharge assistant means of the surface contact type, most of which have motion which is rotary in character.

415 This subclass is indented under subclass 251. Dispensers having an endless belt conveyor as the discharge assistant.

SEE OR SEARCH THIS CLASS, SUBCLASS:

371, for endless belt dispensers with trap chambers.

SEE OR SEARCH CLASS:

48, Gas: Heating and Illuminating, subclass 39 for apron or belt carbid feeders for acetylene generators.

100, Presses, subclass 151 for presses not elsewhere classified in which the material is concurrently compressed and conveyed by an endless conveyor belt.

184, Lubrication, subclasses 61+ for conveyor type lubricators.

198, Conveyors: Power-Driven, appropriate subclasses, for endless conveyors, especially subclasses 56+, subclasses 550.9, 550.13, 582, and for an endless belt conveyor combined with a hopper or bin.

221, Article Dispensing, subclass 253 for article dispensing devices having endless belt carried discharge assistant means.

241, Solid Material Comminution or Disintegration, subclass 223 for such devices combined with comminutors.

291, Track Sanders, subclass 27 for chain type sand feeders.

416 This subclass is indented under the class definition. Dispensers having siphons to remove the container contents.

SEE OR SEARCH THIS CLASS, SUBCLASS:

204, for siphons combined with discharge assistants.

SEE OR SEARCH CLASS:

4, Baths, Closets, Sinks, and Spittoons, appropriate subclasses.

48, Gas: Heating and Illuminating, subclass 17, for acetylene generator water feeders with siphon.

137, Fluid Handling, subclasses 123+ for siphons, per se, and in fluid handling systems.

184, Lubrication, subclass 85 for gravity feed lubricators with siphon.

420 This subclass is indented under the class definition. Dispensing devices specially designed to dispense flowable materials in the form of drops.

(1) Note. The majority of the devices disclosed for this purpose were structurally and functionally more closely related to other devices and have been placed in preceding subclasses on the basis of the combination involved, means employed and mode of operation. This and the indented subclasses take only the residual patents specially designed to dispense material in the form of drops not having the features above provided for. Some of the preceding subclasses having such subject matter are referred to below.

SEE OR SEARCH THIS CLASS, SUBCLASS:

206+, for resilient wall devices.

386+, for those having followers.

SEE OR SEARCH CLASS:

119, Animal Husbandry, subclass 72.5 for drop delivering watering devices.

138, Pipes and Tubular Conduits, subclasses 40+ for flow restrictors in pipes and tubular conduits.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 23+ for drop formers having pistons or other discharge assistants which are removable from the supply container for discharge.

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 38, 40+, 46, and 51 for slow diffusers with drop-by-drop escape of the liquid.

431, Combustion, subclass 330 for a fuel burner in which the fuel is fed to the combustion area in the form of drops or as a flowing film.

421 This subclass is indented under subclass 420. Dispensers in which either or both (1) the closure for the container, or (2) the wall defining the container neck or outlet, have one or more grooves therein providing for drop form discharge.

422 This subclass is indented under subclass 420. Dispensers utilizing valves.

(1) Note. Mere openings adapted to be closed by the finger are not considered valves.

423 This subclass is indented under the class definition. Dispensers having means which separate from a supply a layer of material which adheres to a surface exposed thereto, the layer being removed from such surface for use by a separate instrument, not claimed, as a brush, sponge, the fingers, etc.

(1) Note. This group is analogous to traps, and differs therefrom in having no means to confine the material, which remains separated from the source material merely by adhesion to the surface which has been exposed to it.

SEE OR SEARCH THIS CLASS, SUBCLASS:

403, for discharge assistants of the film accumulating type.

SEE OR SEARCH CLASS:

118, Coating Apparatus, subclasses 256+ for coating apparatus in which a solid applicator separates a film of coating material from a bulk supply for application to a work piece.

159, Concentrating Evaporators, subclasses 5+.

424 This subclass is indented under the class definition. Dispensers in which overfilling or unused material is returned from a trap to the supply container or source of supply.

SEE OR SEARCH THIS CLASS, SUBCLASS:

109+, for dispensers having means to cause drip, leakage, or waste to return to the supply.

318, for dispensers having discharge assistants and means to return material to the supply from the discharge side of the assistant.

424.5 This subclass is indented under the class definition. Dispensers involving combinations of supply container and trap chamber.

(1) Note. These traps are stationary or rigidly associated with the supply container, as distinguished from the movably related combinations previously provided for, although they may have movable parts as cutoff or volume varying means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

129+, for trap chamber dispensers combined with additional material sources or additional compartments, receptacles, or with a spaced jacket (forming part of a second dispenser or having a non-dispensing use).

205, where there is a nongravity feed to a trap chamber which does not have a discharge assistant.

252+, where there is a supply having a discharge assistant which delivers to a trap chamber or casing having a discharge assistant associated therewith.

335, for devices in which the supply of material to be dispensed must be under pressure (by means not claimed) and which operate a discharge assistant which may be associated with a trap chamber.

344+, and see the notes thereto for movable trap chambers.

372+, where there is a source having no discharge assistant which delivers to a casing housing a discharge assistant.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 156+ for gas pressure discharge of feed traps to boilers, etc., subclasses 171+ for fluid separating traps in diverse fluid containing pressure systems; subclasses 571+ for plural tanks or compartments, including traps, in series flow relation; subclass 596 for stop and waste systems.

425 This subclass is indented under subclass 424.5. Dispensers having a supply, a chamber to which material is delivered from the supply and cut-off means for either or both the inlet to or the outlet from the trap chamber.

(1) Note. The cutoff may be a valve, closure or other means for the purpose. The separation of the predetermined charge from the main supply, or the discharge from the trap chamber may be effected by tilting the assembly where only one of the trap openings is positively controlled for effecting the trapping operation.

(2) Note. Trap chambers where the valve or closure has no material cutoff function in connection with the trapping operation are not included.

(3) Note. In the handling of discrete articles for dispensing, the release of individual articles from a hopper or stack source of articles is often effected by alternately closing and opening plural series controller members in the manner typical of the operation of many of the trap chamber cutoffs of this and the indented subclasses (Class 222, subclasses 425+). In appropriate cases, the search should be completed in Class 221, particularly in subclasses 289+ thereof, where such article dispensing devices are classified.

SEE OR SEARCH THIS CLASS, SUBCLASS:

454, for supply container and trap chamber assemblies where separation and delivery of the charge are both effected only by tilting the assembly, even though a closure or cutoff for the trap outlet is present but not necessary for the trapping operation.

544+, and see the notes thereto for dispensers with flow controllers and closures.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 571+ for distribution systems comprising plural tanks in series flow relation; subclass 596 for stop and waste systems; subclasses 613+ for distribution systems comprising a single flow path, which may be a tank or trap with serial valves and/or closures.

177, Weighing Scales, subclasses 60+ for the control of feed and discharge of a weigh chamber.

221, Article Dispensing, subclasses 289+. See (3) Note, above.

366, Agitating, subclasses 27+ for mortar mixers with dynamic charging and delivery, and subclasses 131+ for mixers of general utility having interrelated feed and discharge.

426 This subclass is indented under subclass 425. Dispensers having more than one trap chamber, at least two trap chambers being arranged so that one does not discharge into the other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

436, for serial traps arranged so that the material passes from one through another in order.

427 This subclass is indented under subclass 426. Dispensers having a single controller element having a motion of rotation about its own axis and controlling the outlets of at least two trap chambers.

(1) Note. The inlets may be controlled by the same element, or by another similar member, or by other cutoff elements.

428 This subclass is indented under subclass 426. Dispensers in which at least two of the trap chambers have their discharge controllers having a common operating member or other interconnecting means for positively relating the operations of the respective controllers.

429 This subclass is indented under subclass 428. Dispensers having the discharge controllers interconnected for simultaneous movement to open or closed position.

430 This subclass is indented under subclass 426. Dispensers in which at least two of the plural trap chambers are of different capacities.

(1) Note. The trap chambers may have a common outlet, but their discharges are independent and separately controlled.

SEE OR SEARCH THIS CLASS, SUBCLASS:

436, for trap chambers in series where the material discharged from the more remote chambers passes through the

chambers nearer the final outlet, or through passages continuously connected with such chambers.

431 This subclass is indented under subclass 425. Dispensers having plural discharge outlets from a single trap chamber.

SEE OR SEARCH THIS CLASS, SUBCLASS:

424, for arrangements for returning material from the trap chamber to the source of supply, usually through a separate outlet. The material returned may be over-fill material or merely unused.

443, for arrangements for discharging material from the supply without its passing through the trap chamber.

478+, and see the notes thereto for dispensers having plural openings not restricted to trap chambers, including plural dispensing openings (one of which may serve as a vent when material is not being discharged therethrough).

432 This subclass is indented under subclass 431. Dispensers having the outlets at different levels in the trap chamber (with reference to the trap chamber contents) for the purpose of discharging different volumes from one trap chamber.

SEE OR SEARCH THIS CLASS, SUBCLASS:

434+, for trap chambers having other means for varying discharge volume.

433 This subclass is indented under subclass 432. Dispensers having discharge controllers for the different outlets operable independently.

434 This subclass is indented under subclass 425. Dispensers having means for varying the discharge volume per trapping operation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

282+, for dispensers with movable trap chambers and having discharge volume varying means, and see the notes thereto for related devices.

430, for plural, nonserial, trap chambers, at least two being of different capacities.

432+, for trap chambers having outlets at different levels to vary the discharge volume.

435 This subclass is indented under subclass 434. Dispensers having means to prevent adjustments of volume varying means during dispensing.

SEE OR SEARCH THIS CLASS, SUBCLASS:

34, for registers with means to prevent zero setting during discharge.

436 This subclass is indented under subclass 434. Dispensers having plural trap chambers in series with provision for dispensing from one or more of the series to vary the volume discharged.

(1) Note. The traps may be constituted by a series of cutoffs in a passage of more or less uniform size.

SEE OR SEARCH THIS CLASS, SUBCLASS:

284, for trap chambers in series where there is also a discharge assistant.

437 This subclass is indented under subclass 434. Dispensers in which the flow from the supply to the trap chamber is (1) of the barometric control type, or (2) is of the type where solid material in the trapping chamber builds up to its angle of repose and stops flow from the supply, and means are provided to vary the volume delivered to the trap chamber.

SEE OR SEARCH THIS CLASS, SUBCLASS:

353, for movable trap chambers of this type.

457, for miscellaneous chambers of this type not having volume varying means, and see the notes thereto for related art.

479, for dispensers having plural coterminous openings (usually tubular spouts), many of which are disclosed for operation on a barometric principle when used to deliver to an unclaimed receptacle.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 261 and 453+ for barometric type fluid handling systems.

438 This subclass is indented under subclass 434. Dispensers having movable means which changes the volumetric capacity of the chamber.

SEE OR SEARCH THIS CLASS, SUBCLASS:

251+, or the places set forth in the notes thereto, where the movable means which changes the chamber volume also assists in causing discharge because of such motion, particularly subclasses 305+.

439 This subclass is indented under subclass 438. Dispensers in which the means movable to change the volumetric capacity carries a cutoff and/or its seat.

440 This subclass is indented under subclass 438. Dispensers in which a volume changing means is adjustable in a direction at right angles to the related trap surface. The adjustment may be accomplished by rotation with axial movement.

SEE OR SEARCH THIS CLASS, SUBCLASS:

307+, for movable trap chambers having such means.

441 This subclass is indented under subclass 425. Dispensers having container handles or handgrips connected to a dispenser container by means of which the dispenser may be handled.

(1) Note. The handle must be secured to dispensing container for handling the container; operating handles for movable dispenser parts are not included except when in combination with a container handle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

210, for dispensers with resilient walls having handles or handgrips.

323+, for dispensers with discharge assistants having handles or handgrips.

465.1+, for miscellaneous dispensers with handles or handgrips.

442 This subclass is indented under subclass 425. Dispensers having passages for venting the trap other than the dispensing passages or openings to accommodate the actuating members (even though such passages for dispensing or for actuating means are claimed as vents.

SEE OR SEARCH THIS CLASS, SUBCLASS:

332, for movable trap chambers with vents.

478+, for miscellaneous dispensers with plural openings, one or more of which may be vents, and see the notes thereunder.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 171+ for fluid separating traps and vents in diverse fluid handling pressure systems.

443 This subclass is indented under subclass 425. Dispensers having either an outlet other than the trap chamber or having the cutoffs adjustable to provide for free flow through the trap chamber.

(1) Note. Many unitary cutoffs for both inlet and outlet may be held in an intermediate position, permitting free flow of the material, for which see subclasses 451+. When special means is provided for holding the cutoff in such position, the patents are here.

SEE OR SEARCH THIS CLASS, SUBCLASS:

431+, for a trap chamber having plural outlets.

451, see note 1.

444 This subclass is indented under subclass 425. Dispensers in which the trap is filled and emptied through a single passage, and the cutoff alternately connects this passage with the supply and the dispenser outlet.

SEE OR SEARCH THIS CLASS, SUBCLASS:

306, for movable trap chambers with adjustable bottom volume varying means, with a single inflow-outflow passage.

363+, for oscillating trap chambers having a single inflow-outflow passage.

366, for miscellaneous reciprocating trap chambers having a single inflow-outflow passage.

368+, for rotary trap chambers having single inflow-outflow passages.

445 This subclass is indented under subclass 425. Dispensers having valves or other cutoffs for both inlet and outlet of the trap connected for relative motion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

450+, for those not interconnected at all and those rigidly interconnected.

487, for miscellaneous dispensers having plural openings and plural, nonrigidly interconnected valves and/or closures.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 304+ for relatively movable stop and waste valves in hydrants.

446 This subclass is indented under subclass 445. Dispensers in which the connection consists of an element rigidly carried by one valve or cutoff to engage the other or a rigid element carried thereby by a mere friction or abutting contact.

SEE OR SEARCH THIS CLASS, SUBCLASS:

52+, for connections operated by the trapped material for preventing operation of cutoff until trap is entirely filled or emptied.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 305 for stop and waste valves in hydrants having a similar abutting relation.

447 This subclass is indented under subclass 445. Dispensers in which the cutoffs both reciprocate nonpivotally to perform the trapping operation, but have no other character of motion.

448 This subclass is indented under subclass 425. Dispensers having a portion of the cutoff actuating means relatively movable with respect to the cutoff.

SEE OR SEARCH THIS CLASS, SUBCLASS:

177, for actuation by the ground wheel of an ambulant support.

445+, for cutoffs interconnected for relative movement.

505+, for miscellaneous dispensers having relatively movable actuators for nozzles, valves, closures or other movable outlet elements.

449 This subclass is indented under subclass 425. Dispensers in which some of the trap forming elements are biased to a desired position by spring or other means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

511+, and see the notes thereto for dispensers of other types having biasing means.

450 This subclass is indented under subclass 425. Dispensers having valves or other cutoffs for both inlet and outlet passages of the trap.

(1) Note. A single valve which closes the two passages alternately is here.

SEE OR SEARCH THIS CLASS, SUBCLASS:

445+, for nonrigidly interconnected inlet and outlet cutoffs.

476, for two valves which alternately close the same outlet, without structure defining a trap chamber.

451 This subclass is indented under subclass 450. Dispensers having valves or cutoffs connected for operation without relative movement of the cutoff members or surfaces to one another.

SEE OR SEARCH THIS CLASS, SUBCLASS:

344+, for cutoff units which shift the included charge of material bodily to a discharge position removed from the intake position.

452 This subclass is indented under subclass 451. Dispensers in which the cutoff unit rotates and/or pivots in the trapping operation but has no other character of motion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

367+, for rotary trap chambers, and see the notes thereto.

444, for a cutoff or valve which alternately connects the single orifice of a trap with separate inlet and outlet passages of the dispenser.

453 This subclass is indented under subclass 451. Dispensers in which the cutoff unit is mounted for reciprocable motion substantially along the axis of the openings controlled, but having no other character of motion.

(1) Note. A single cutoff element alternately closing the inlet and outlet passages of the trap is here.

SEE OR SEARCH THIS CLASS, SUBCLASS:

361+, for reciprocating trap chambers, particularly subclass 365, for those having plural concentric enlargements on a stem.

476, for plural cutoffs alternately seating at a single outlet, there being no structure defining a trap.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 307+ for unitary reciprocating stop and waste valves in hydrants; subclasses 596+ for other stop and waste systems; subclasses 602+ for multiple inlet with single outlet systems; subclasses 861+ for systems with flow control means for plural passages; subclass 613 for systems comprising a single flow path having plural serial valves; and subclass 627.5 for sequentially closing and opening alternately seating flow controllers.

454 This subclass is indented under subclass 424.5. Dispensers having a trap chamber so connected to the main container that the organization must be tilted both to fill the trap and discharge material therefrom.

SEE OR SEARCH THIS CLASS, SUBCLASS:

425+, for such devices having valves or other cutoffs necessary to the trapping operation, and see the notes thereto.

457.5, for dispenser organizations having a U-shaped path for material to be discharged, but no enlargement or other arrangement forming a trap chamber, so that material is caused to traverse the path by shaking the container to and fro.

584, for a dispensing inkwell organization which must be tilted to fill the trap from the supply chamber and righted for access of a penpoint to the trap.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 288 for article dispensers comprising tiltable container sources of supply having trap means associated therewith.

455 This subclass is indented under subclass 454. Dispensers having a supplementary trap which fills as final trap dispenses, so that each charge dispensed is segregated by the tilting movements of the preceding dispensing operation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

547, and 564, for material discharge guides which direct material toward or away from the outlet but do not segregate the position to be discharged.

456 This subclass is indented under subclass 454. Dispensers having a single discharge passage which functions also as the trap chamber.

457 This subclass is indented under subclass 424.5. Dispensers in which flow from the supply to the trapping chamber is (1) of the barometric control type, i.e., the vent to the supply is closed by material accumulated in the trapping

chamber, or (2) is of the type where solid material in the trapping chamber builds up to its angle of repose and stops flow from the supply.

SEE OR SEARCH THIS CLASS, SUBCLASS:

353, for movable trap chambers of this type.

437, for trap chambers of this type having cutoffs and means to vary the volume delivered to the trap chambers.

476, and following subclasses, for flow controllers which do not close outlet but cause solid material to build up to its angle of repose and stop flow from the supply, there being no trap.

479, for dispensing having plural coterminous openings (usually tubular spouts), many of which are disclosed for operation on a barometric principle when used to deliver to an unclaimed receptacle.

585+, for a barometric dispensing inkwell; and see the search notes thereto.

SEE OR SEARCH CLASS:

119, Animal Husbandry, for barometric watering devices.

137, Fluid Handling, subclass 261 and 453+ for barometric type fluid handling systems.

184, Lubrication, subclass 84 for barometric lubricators.

261, Gas and Liquid Contact Apparatus, subclass 73 for barometric liquid supply means for such apparatus.

401, Coating Implements With Material Supply, subclass 120 for the combination of a container having a reservoir of coating material, a material trap chamber to which flow from the reservoir is controlled by atmospheric pressure, and a hand-manipulable applicator separable from the container for use independently thereof.

457.5 This subclass is indented under the class definition. Dispensers of the hand shaker type having means to form an outlet passage extending generally parallel to the path taken by the material in reaching the container end of the passage so that the material discharged follows a generally U-shaped path.

(1) Note. The passage may be an internally extending outlet or it may be formed externally of the supply container by a spaced shield or jacket.

SEE OR SEARCH THIS CLASS, SUBCLASS:

454, for dispensers in which the material is discharged through a U-shaped path but in which a portion of the path forms a trap chamber which is filled and emptied by successive tilting movements of the dispenser.

547, and 564, for dispensers of the gravity discharge type having material guide means for the interior of the container.

459 This subclass is indented under the class definition. Dispensers having means fixed relatively to the supply receptacle but acting on movement of the receptacle or of the material to cause an admixing of the material to loosen compacted material. etc.

(1) Note. This subclass includes dispensers having fixed structure which inhibits compacting of the material in the vicinity of the outlet by providing a space into which the material may spread, such as a downwardly diverging side wall or a laterally disposed connecting compartment, so that pressure at the outlet is reduced and bridging or compacting is prevented.

SEE OR SEARCH THIS CLASS, SUBCLASS:

160+, where the receptacle is movably mounted.

460 This subclass is indented under the class definition. Dispensers having outlets of funnel type, i.e., outlets so shaped and so related to the receptacle with which they are connected as to be capable of use as funnels.

(1) Note. The term “funnel” is used in its conventional sense as guiding the flow from a pouring type container to a desired point, as into a receiver.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 331+ for a funnel type filling means with receiver or receiver coacting means.

461 This subclass is indented under subclass 460. Dispensers in which the funnel is connected to the dispensing container by means permitting relative motion.

462 This subclass is indented under subclass 460. Dispensers in which the funnel is permanently connected to the container.

463 This subclass is indented under the class definition. Dispensers (1) having features specially designed to permit the receptacle to be rocked on the surface on which it may be resting, usually to a dispensing position and/or (2) having weights incorporated in the receptacle structure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

160+, for movably mounted dispensers.

173+, for dispensers with a casing or support.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 284 for article dispensers having weighted base or support structures.

464.1 INTERNALLY EXTENDING OUTLET PIPE:

This subclass is indented under the class definition. Subject matter including an outlet pipe extending internally from the container.

(1) Note. A dispenser adapted to operate by suction is placed here when only the container and internal outlet pipe are claimed, even though the arrangement is such that suction is necessary to cause dispensing. Certain types of canteens and those containers for use with spray guns having the internally extending outlet pipe as part of the container assembly are included in this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

211, for a resilient wall dispenser having an internally extending outlet pipe.

382, for a discharge assistant casing having an internally extending outlet pipe.

434, for a trap chamber (disclosed as continuously connected to a supply) provided with an internally extending outlet pipe which may be adjusted relative to the trap and its content to vary the discharge volume.

456, for a tiltable container trap having a single discharge passage forming a trap.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 434+, especially 440 and 442+ for a level responsive fluid handling system including an internally extending inlet pipe; subclasses 577+ and 590+ for a distribution system comprising an internally extended flow pipe.

464.2 Porous or having plural apertures:

This subclass is indented under subclass 464.1. Subject matter wherein at least a portion of the outlet pipe is made of a porous material or the pipe has more than one inlet passages.

(1) Note. An outlet pipe having a porous material or plural inlets for the purpose of separating are not in this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

189.11, for an internally extended outlet pipe with a filter

464.3 Movable:

This subclass is indented under subclass 464.1. Subject matter wherein the outlet pipe is (a) so constructed as to be movable relative to a part to which it is attached, or (b) so connected to other part as to be movable relative thereto for purpose other than mere attachment or detachment.

464.4 Weighted:
This subclass is indented under subclass 464.3. Subject matter wherein the outlet pipe includes a weight to keep an inlet of the pipe within a content to be dispensed.

464.5 Telescopic:
This subclass is indented under subclass 464.3. Subject matter including an outlet pipe constructed of two or more sections connected to one another in a manner such that one section projects into another to provide a relative movement therebetween.

SEE OR SEARCH CLASS:
220, Receptacles, subclass 8 for a telescopic receptacle.
285, Pipe Joints or Couplings, subclass 32 for a threaded telescopic insertable section and subclasses 145.1+ for a joint system comprising serial relatively movable diverse joints, in which one is telescopic.

464.6 Float:
This subclass is indented under subclass 464.3. Subject matter wherein a floating means is associated with the outlet pipe to provide a buoyancy to the pipe.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 442+ for a level responsive fluid handling system.

464.7 Including sump:
This subclass is indented under subclass 464.1. Subject matter wherein an inlet to the outlet pipe extends into a supplemental or a trap chamber communicating with a supply chamber intended for completely exhausting the dispensing material or trapping a small amount of dispensing material.

(1) Note. The trap chamber may be formed by walls within the supply chamber, or by a depression in the bottom wall (including conical bottom walls).

465.1 WITH CONTAINER HANDLE OR HANDGRIPS:
This subclass is indented under the class definition. Dispensers having a handle or handgrip connected to the dispenser container and by means of which the dispenser may be handled.

466 This subclass is indented under subclass 465.1. Dispensers having at least two handles.

(1) Note. One of the handles may be an auxiliary handle which facilitates tilting the receptacle for pouring.

SEE OR SEARCH THIS CLASS, SUBCLASS:
164+, for tiltably mounted receptacles.

467 This subclass is indented under subclass 466. Dispensers in which at least one handle is detachable.

468 This subclass is indented under subclass 465.1. Dispensers having a vent in the container handle.

SEE OR SEARCH THIS CLASS, SUBCLASS:
478+, for dispensers having plural openings, one or more of which may be vents, and see the notes to such subclasses.

469 This subclass is indented under subclass 465.1. Dispensers having a handle for the supply container and movably connected thereto, connected also to a valve, closure, or other flow controller or its actuating means.

470 This subclass is indented under subclass 465.1. Dispensers having the container handle and the actuator for the valve, closure or other flow controller are so disposed as to be conveniently manipulated by one hand.

SEE OR SEARCH THIS CLASS, SUBCLASS:
142.1+, for plural containers which may be grasped in the hand and which have an actuator for a closure so related to the grasped surface that the grasping hand may be employed to actuate the closure.

471 This subclass is indented under subclass 470. Dispensers having the actuator movable to and fro in a straight line in the direction of the length of the handle.

472 This subclass is indented under subclass 470. Dispensers having the actuator pivotally mounted.

473 This subclass is indented under subclass 472. Dispensers having the actuator pivotally mounted on the container handle.

474 This subclass is indented under subclass 472. Dispensers having the pivoted actuator extending substantially in the same direction as the main or hand fitting position of the handle.

475 This subclass is indented under subclass 465.1. Dispensers having the spout serving as a handle, or having the handle positioned to protect or support the spout or as a nonuse housing for the spout.

SEE OR SEARCH THIS CLASS, SUBCLASS:

538+, for nonuse positioning or housing of discharge guides in general.

475.1 Handle and spout for hot liquid decanters (e.g., coffee servers):
This subclass is indented under subclass 465.1. Dispensers in which both a handle and spout are attached to a dispensing decanter for hot liquids.

(1) Note. Most of these dispensers are "coffee decanters".

476 This subclass is indented under the class definition. Dispensers in which plural spaced discharge controllers or closures are alternately seated in a single container outlet.

(1) Note. The structure necessary for a trap chamber is lacking and the quantity discharged being determined only by the duration of the interval of free flow from the unseating of the first to the seating of the second flow controller or closure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

196.1+, for this subject matter where the dispenser is of the hand manipulable shaker type.

365, for reciprocating trap chambers having plural concentric enlargements on a stem.

425+, for plural, spaced discharge controllers associated with a trap chamber, and see the Notes thereto.

SEE OR SEARCH CLASS:

137, Fluid Handling, see search note under Lines With Other Classes and Within This Class, Stationary Traps, this class definition.

221, Article Dispensing, subclass 298 for article dispensers having separately acting series controllers, and subclasses 299+ for similar structures in which the series controllers are of integral structures.

477 This subclass is indented under the class definition. Dispensers having means in connection with operating means for the discharge controllers or closures for retarding the normal rate of operation and thus providing an interval between the actuating operation and the effective action of the controller or closure to cut off discharge, during which interval dispensing occurs.

SEE OR SEARCH THIS CLASS, SUBCLASS:

59+, for cut offs operated by rate of flow responsive mechanism.

476, where there are spaced alternately seated flow controllers or closures.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclasses 15+, and particularly subclass 16 for article dispensing devices having timing or delay mechanism associated therewith.

251, Valves and Valve Actuation, subclasses 48+ for nonstop valves, many of which have means, such as dashpots or current rotating elements for retarding or delaying the closing action of the valve.

478 This subclass is indented under the class definition. Dispensers having (1) two or more openings at least one of which is a dispensing outlet, or (2) two or more separate discharge guides, or (3) a combination between (1) and (2).

(1) Note. Provided that there is one dispensing outlet, the additional openings may be for filling, venting or other nondispensing purpose.

(2) Note. Pattern type openings formed in either the container wall an interior guide or baffle or in a flow controller, are treated as a single opening; see subclasses 564 and 565 and the notes thereto.

(3) Note. Plural openings may comprise (1) containers having two or more separate openings through the walls thereof, at least two of which are for purposes other than the mere passage of actuating elements, mounting or connecting means for movable dispenser parts, (2) containers having a single opening thereinto and a discharge controller having plural openings (one or all of which may be pattern type) so related to the container opening as to permit flow through the controller openings alternatively, (3) containers having a single opening, and a discharge controller having a single opening (which may be of pattern type) so mounted as to present its opening over the container opening or to uncover the container opening (this type usually having a third position in which the container opening is closed with the flow controller opening out of register therewith).

(4) Note. In subclasses following 478+ are a container having a single opening (other than openings for the mere passage of actuating elements, mounting or connecting means for movable dispenser parts) and a discharge controller having a single opening (including pattern type) the discharge controller being movable from outlet closing position to a position to cause its opening to partially or wholly register with the container opening.

(5) Note. In the subclasses following 478+ are dispensers having a single discharge opening with movable elements associated therewith (as movable discharge guides, closures, valves, or other flow controllers, etc.) and actuating, mounting, or connecting means for such movable elements, in which the actuating, mounting, or connecting means may pass through the container walls through openings formed for such purposes. Where structure or relations are claimed by means of which the actuator mounting or connecting means or its opening also function as vents or for any purpose in addition to permitting passage of the actuating, mounting, or connecting means, classification is in this (478) or the indented subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

42, for indicator combinations to indicate which of plural outlets are selected for operation.

69, for float controlled vents.

85+, for cutter combinations which cut plural openings in a container whose contents are to be dispensed.

129+, for combinations of two or more dispensers.

188, for fluid-trap-seal for outlets and vents.

189.01, 189.02+, and 189.06+, for dispensers having porous and/or foraminous material for outlets and vents, the purpose being the separation of diverse types of material.

249+, for dispensers with a floating piston and plural or alternate discharge.

252+, for dispensers with plural discharge assistants delivering to the same or different outlets.

318, for miscellaneous discharge assistants with material by-pass or return to supply.

330+, for miscellaneous discharge assistant and devices having plural material outlets.

332, for movable trap chambers having a vent passage.

375, for dispensers having a supply delivering to a casing enclosed discharge assistant and having antileak or antisiphon means.

387, for material containers having a follower with means to vent gas from the material side of the follower.

396, and 397, for material containers in which fluid under pressure contacts the material to cause discharge and having fluid pressure limiting means, usually a pressure actuated check valve or manual valve for venting.

397, see reference to 396 above.

425+, and see the notes thereto for trap chambers, which have an inlet connected to a supply and an outlet, 426+, having plural nonserial trap chambers connected to the same supply, 431+, having trap chambers with plural or alternate discharge outlets and 442, trap chambers with vents.

468, for vents in a dispenser receptacle handle.

564, for serial discharge guides, flow restrictors or flow restrictor and discharge guide, none of which are controllable. See (2) Note.

565, see note 2 above.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 561+ for distribution systems comprising plural outlets, inlets, overflows and/or vents, especially subclasses 583+ for systems with plural openings, one an access opening or gas vent, subclasses 861+ for plural controlled passages and 613+ for single flow path, including tanks, with plural valves or closures, as for tank inlets and outlets.

184, Lubrication, subclasses 88.1+, for single receptacle lubricators having plural gravity feeds, and see subclasses 88+ for oil cup closures.

215, Bottles and Jars, subclasses 307+ for closures providing means whereby the interior of the receptacle is communicable with the exterior.

220, Receptacles, subclasses 366.1 and 367.1+, for closures with vents.

221, Article Dispensing, subclass 252 for article dispensing devices having discharge assisting means and plural article outlets, and subclasses 61+ and 281+ for article dispensers having separate inlets for replenishment or access.

479 This subclass is indented under subclass 478. Dispenses in which the openings at the ends remote from the supply container (usually the ends of tubular spouts) terminate adjacent each other. One is usually the dispensing outlet and the other a vent to be closed by accumulation of material in an unclaimed trap or independent container.

SEE OR SEARCH THIS CLASS, SUBCLASS:

353, for movable, barometric trap chambers.

437, for nonmovable, barometric trap chambers with means to vary the volume trapped.

457, for miscellaneous barometric trap chambers, and see the Notes thereto, for related art.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 295+, especially subclass 308, for multiple passage filling means for diverse flows.

480 This subclass is indented under subclass 478. Devices of the “dredge top” type, i.e., hand manipulable, shaker type in which there are claimed a plurality of dispensing openings having different characteristics in the top thereof, or different functions.

(1) Note. For example, there may be plural dispensing openings of different size to be selectively used, arrangements to have one large pouring opening and a multiplicity of small sifter openings, etc.

(2) Note. See notes (1) through (4) of subclass 478 for a more complete statement on plural openings.

(3) Note. See Lines With Other Classes and Within This Class, Pattern or Sifter Form Outlet and With Material Seperator and Hand Manipulable Shakers, in the main class definition and see the notes thereto.

SEE OR SEARCH THIS CLASS, SUBCLASS:

478, see note (2) above.

486, for devices not of the hand manipulable shaker type that have plural outlets and common or interconnected discharge controllers and/or closures operable to expose selected one or groups of outlets.

547, for dispensers having a foraminous baffle in the container at a point removed from the outlet, which is provided with a closure or discharge controller. The baffle serves to hold back or restrict the passage of material to the outlet or to distribute the flow.

564, for dispensers having foraminous baffles remote from the outlet, which serve to distribute and/or restrict the passage of material to the outlet, particularly for use in hand manipulable shakers.

565, and see the notes thereto for openings of sifter, sprinkler or pattern type.

SEE OR SEARCH CLASS:

251, Valves and Valve Actuation, subclasses 205+ for valves with graduated ports.

481 This subclass is indented under subclass 478. Dispensers having at least one element in the form of either a closure or a flow controller (e.g., restrictor or valve) for at least one of the openings.

(1) Note. A flow controller may interrupt discharge by establishing the angle of repose of the material, when the outlet is not entirely closed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

425+, and see the notes thereto for trap chambers having single or plural cutoffs.

502+, for sectional controllers or closures for a single outlet.

544+, and see the notes thereto for flow controllers and closures in other relations.

481.5 This subclass is indented under subclass 481. Dispensers having vent means related to one of the openings, which vent means comprises a flexible pipe, a pipe mounted for movement relative to an outlet element, or means having an inlet connected to the supply container at a point remote from the material outlet and connected to said material outlet or controlled by the operation of the means for controlling said material outlet.

SEE OR SEARCH THIS CLASS, SUBCLASS:

400.5, through 402, and especially subclass 400.5 for similar organizations having a fluid pressure operating pump attached to the remote opening.

SEE OR SEARCH CLASS:

217, Wooden Receptacles, subclasses 98+, for wooden barrel bung vent structures.

220, Receptacles, subclasses 366 and 367+, for vents associated with metallic receptacle structure.

482 This subclass is indented under subclass 481. Dispensers having at least two closures and/or flow controllers or one closure or controller for at least two openings.

SEE OR SEARCH THIS CLASS, SUBCLASS:

506, and see the notes thereto for plural closures and/or flow controllers for single openings.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 625+ for multiway valve units.

483 This subclass is indented under subclass 482. Dispensers having means interconnected with the discharge controllers or closures preventing manipulation of one unless another is in a certain desired position.

SEE OR SEARCH CLASS:

34, Drying and Gas or Vapor Contact With Solids, subclass 87 for interlocks applied to such apparatus.

48, Gas: Heating and Illuminating, subclass 36 for acetylene generator water feeds with interlocking devices.
49, Movable or Removable Closures, subclass 49 for means to direct or control traffic through a closure passage.
137, Fluid Handling, subclass 586 for tank access and outlet interlock or telltale.
192, Clutches and Power-Stop Control, subclasses 116.5+ for stop mechanism interlocks.

484 This subclass is indented under subclass 482. Dispensers having at least two of the flow controllers and/or closures either (1) interconnected to be moved together, or (2) integral with each other.

SEE OR SEARCH THIS CLASS, SUBCLASS:
425+, for interconnected discharge controllers that form a trap chamber.
476, for spaced alternately seated controllers for a single outlet.

485 This subclass is indented under subclass 484. Dispensers in which the plural interconnected flow controllers and/or closures are for two or more dispensing outlets.

SEE OR SEARCH THIS CLASS, SUBCLASS:
431+, for plural outlets from a trap chamber.
480, and the notes thereto for pattern, sprinkler or sifter type. The presence of some structure to give the outlets individual significance is required for this subclass (485) as interior or external material discharge guides, separate controller or closure element for the outlets.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 861+ for plural controlled flow passages in a distribution system.

486 This subclass is indented under subclass 485. Dispensers having the discharge controllers and/or closures operable to expose or control certain groups of the outlets selectively or having them relatively operable or adjustable individually either by adjustment of the actuators or by additional discharge controllers and/or closures.

SEE OR SEARCH THIS CLASS, SUBCLASS:
142.6, and 144.5, for plural compartment dispensers in which closure means associated with the outlets of the various compartments permit selective opening and closing of such outlets.
142.7, for plural compartment dispensers having plural, relatively movable outlet valve means.
283, for plural discharge volume varying means for discharge assistants.
485, where only provision for variable discharge is due to the simultaneous movement of all of the flow controllers and/or closures to less than their fully open position.
502, for sectional discharge controllers or closures for single outlet openings, each section being movable relative to the other.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 627, 627.5, 628, 635, and 636 for sequentially or selectively operated plural valves.

487 This subclass is indented under subclass 484. Dispensers in which at least two discharge controllers and/or closures are connected together for relative movement by nonrigid connecting means.

SEE OR SEARCH THIS CLASS, SUBCLASS:
445+, for trap chambers having nonrigidly interconnected cutoffs.

488 This subclass is indented under subclass 481. Dispensers in which at least two passages merge into a single passage, which single passage has a flow controller or closure.

(1) Note. The plural passages may be either external or internal with respect to the flow controller or closure.

489 This subclass is indented under subclass 488. Dispensers in which the flow controller or closure is of the screw type, i.e., carries or is rigid

with an element that carries screw threads for connection to some other part, so as to be movable because of screw motion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

549+, for miscellaneous dispensers with screw type flow controller or closures.

SEE OR SEARCH CLASS:

251, Valves and Valve Actuation, subclasses 215+ and 264+ for screw actuated valves.

490 This subclass is indented under the class definition. Devices in which a diaphragm or nipple of resilient material (such as rubber) has an aperture therethrough, the walls of which contact each other in the normal unstressed condition, the walls separating when stressed to permit passage of material and resiliently returning into contact when the stress is removed.

(1) Note. In many of these devices the pressure of the contents causes the diaphragm or nipple to be stressed. Where the pressure creating means is claimed, see appropriate preceding subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

92+, for collapsible wall receptacles. Where this type outlet is claimed in combination with a collapsible wall type receptacle recited by name (no characteristics thereof being recited, and no combined feature for operating on the wall), the patent is placed in subclass 490.

206+, for resilient wall dispensers.

251+, and see the notes thereto for dispensers having means for creating pressure on the contents to be dispensed.

491+, for other types of resilient outlets operated by pressure of the container contents.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 843 through 860 for a line condition change direct response resilient material valve (i.e., check valve type).

215, Bottles and Jars, subclass 11 for nipples.

251, Valves and Valve Actuation, subclasses 4+ for tube compressors.

491 This subclass is indented under the class definition. Dispensers in which there is a movable outlet element operated by the pressure of the container contents, where the pressure creating means are not claimed.

(1) Note. The movable element is usually a discharge guide, flow controller or closure. Since many types of such devices having manual actuators are capable of actuation by the pressure of the contents, though not intended to so operate, only those disclosed for pressure operation and having no manual actuator are placed here.

(2) Note. Where the means for creating the pressure on the contents is claimed, see appropriate preceding subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

92+, for collapsible wall type receptacles. Where the pressure operable outlet element is claimed in combination with a collapsible wall receptacle recited by name (no characteristics thereof being recited and no combined feature for operation on the wall) the patent is placed in 491+.

251+, and see the notes thereto for dispensers having means for creating pressure on the container contents.

335, for valves, closures, followers, pistons, etc., arranged on the receptacle interior, the pressure of the material dispensed causing the same to move toward the outlet and push material ahead of the same.

490, for slitted resilient diaphragms or nipples.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 455+ for valves operated by a change of line fluid condition, as by increased pressure; subclasses 602+ for systems having multiple inlet with single outlet; subclasses 861+ for systems with

flow control means for plural passages; and subclasses 613+ for single flow path systems with plural serial valves and/or closures.

220, Receptacles, subclasses 203.01+ for a receptacle closure comprising a pressure responsive vent or valve.

221, Article Dispensing, subclass 295 for article dispensers which are latch released and article weight operated.

492 This subclass is indented under subclass 491. Dispensers in which the pressure moved element is of tubular, sleeve or apertured cap form and through which the material is dispensed and which is slidable along its axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

522+, for miscellaneous axially slidable tubes, sleeves and apertured caps, and see the notes thereto.

493 This subclass is indented under subclass 492. Dispensers in which the contents are discharged axially of the movable element.

SEE OR SEARCH THIS CLASS, SUBCLASS:

525, for miscellaneous axially slidable tubes, sleeves or apertured caps and see the notes thereto.

494 This subclass is indented under subclass 491. Dispensers in which the element moved by the pressure of the contents is (1) in the form of a spring, (2) is resilient, and/or (3) is compressible.

(1) Note. Rigid devices, spring biased, are in subclass 491 or other appropriate indented subclasses, but resilient or compressible devices are here (subclass 494) even though there is an additional spring bias.

SEE OR SEARCH THIS CLASS, SUBCLASS:

490, for resilient diaphragms or nipples having slits.

491, see note 1.

495 This subclass is indented under subclass 491. Dispensers in which the pressure moved element is in the form of a nonpivoted element that reciprocates.

496 This subclass is indented under subclass 495. Dispensers in which the movable element is biased by spring or any means other than its own weight.

SEE OR SEARCH THIS CLASS, SUBCLASS:

511+, for miscellaneous dispensers having biasing means for movable parts and see the notes thereto.

497 This subclass is indented under subclass 496. Dispensers in which means are provided (in addition to the biasing means) to hold the movable element against motion.

498 This subclass is indented under the class definition. Dispensers in which means are provided for causing a movable outlet element to move with snap action.

(1) Note. Such means may be applied to the movable element itself, or applied to the actuating means therefor.

SEE OR SEARCH THIS CLASS, SUBCLASS:

542, for compression of a resilient packing type seal for an outlet member, which is not considered snap action.

SEE OR SEARCH CLASS:

24, Buckles, Buttons, Clasps, etc., particularly subclasses 588+, for head and socket-type fasteners operating with a snap action.

74, Machine Element or Mechanism, particularly subclasses 97 and 100, for snap acting mechanical movements.

220, Receptacles, subclass 60, for closures forced into place and held by interfitting integral, snap acting parts of the closure and receptacle.

251, Valves and Valve Actuation, subclass 75 for snap action of valves.

499 This subclass is indented under subclass 498. Dispensers in which the movable element is in the form of a tube, sleeve or apertured cap that moves along its own axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

522+, and see the notes thereto for miscellaneous axially slidable tubes, sleeves or apertured caps.

500 This subclass is indented under the class definition. Dispensers in which a movable discharge guide, flow controller and/or closure is constructed and mounted to move, relative to the container due to action of gravity when the position of the container changes (as by setting on its base which operation causes an element to be actuated) or due to inertia when the container is rapidly moved.

(1) Note. Since many manually movable elements are capable of this operation, only those designed and constructed for such purpose and having no manual actuating means in addition to the movable element have been placed here.

SEE OR SEARCH THIS CLASS, SUBCLASS:

196.1+, for this subject matter where the dispenser is of the hand manipulable shaker type.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 38+ for flow control by change of position or inertia of a fluid handling system.

221, Article Dispensing, subclasses 186+ and 288 for movably mounted and tiltable container trap type article dispensers, respectively, such devices including means responsive to gravity or inertia to effect segregation or ejection of the articles to be dispensed.

401, Coating Implements With Material Supply, subclass 274, wherein the implement is of the brush, broom, or mop type and has means controlling the flow of material from a reservoir to the tool, which means is actuated by a change in position or inclination of the entire implement.

501 This subclass is indented under the class definition. Dispensers in which means are provided for operating a movable outlet element, which actuator or some part thereof extends through the material passage of a nozzle or other discharge guide. The actuator may be an integral part of the movable element.

(1) Note. Dispensers having closures of this same type disclosed to be operated by contact with an applicator, as a pen or brush dipped in the contents, are here.

SEE OR SEARCH THIS CLASS, SUBCLASS:

149+, for cleaning elements extending through a dispenser outlet, and see the note to subclass 501 for the line.

322, for discharge assistants having an actuator extending through the dispenser outlet.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 771 for valve actuators extending through fluid inlet or outlet.

401, Coating Implements With Material Supply, subclasses 208+, where the implement includes a tool which is movable upon contact with the work surface (e.g., roller, ball, endless belt) to transfer material from the reservoir to the work surface; and subclasses 206, 235, 258+, 264, and 272+, for other implements wherein flow-regulating means (e.g., valve) is actuated upon contact of the work-surface-engaging means with the work.

502 This subclass is indented under the class definition. Dispensers where the the discharge controller or closure is formed of two or more parts, each covering part of the outlet opening and each movable both relative to each other and relative to the container.

(1) Note. Slat type devices where all slats are connected together to move as a unit are not included.

(2) Note. The movement may be for adjustment of the outlet size.

(3) Note. For plural outlets having flow controllers or closures, see preceding subclasses, and for single outlets having serial flow controllers or closures, see subsequent subclasses, these being referred to in the following notes.

SEE OR SEARCH THIS CLASS, SUBCLASS:

198, for single outlets bounded by plural vibrating members.

316, for discharge assistants of rotor type with sectional discharge controllers.

481+, for discharge controllers, for plural openings.

545+, and see the notes thereto for plural nonsectional flow controllers or closures for single outlets.

SEE OR SEARCH CLASS:

251, Valves and Valve Actuation, subclasses 1.1+ for valve type blowout preventers comprising an annular valve or segments closing around a well or drill pipe.

294, Handling: Hand and Hoist-Line Implements, subclass 68.24, for hoisting-bucket type with twin doors.

298, Land Vehicles: Dumping, particularly subclasses 25 and 33+.

503 This subclass is indented under subclass 502. Dispensers in which actuation of one section of the controller or closure causes relative movement of another part.

504 This subclass is indented under the class definition. Dispensers having a movable element pertaining to the outlet actuated by a motor.

SEE OR SEARCH THIS CLASS, SUBCLASS:

20, for cutoff valves operated by preset volume or rate of flow mechanism.

333, and see the notes thereto for other motor combinations.

SEE OR SEARCH CLASS:

48, Gas: Heating and Illuminating, subclass 53.3 for diaphragm; e.g., fluid motor, operated poppet valves for carbid dispensers.

105, Railway Rolling Stock, subclass 240 for motor operated doors for dumping car bodies.

251, Valves and Valve Actuation, subclass 11 for heat or bouyancy motor actuated valves; subclasses 12+ for fluid actuated or retarded valves, especially subclasses 25+ for the servo-motor type, and subclasses 129+ for electric motor actuated valves.

505 This subclass is indented under the class definition. Dispensers in which a movably mounted discharge guide, flow controller and/or closure has some means to actuate it which means is so connected with such movable element as to be capable of relative motion. Where two or more of the enumerated elements are interconnected for relative motion, one may be the actuator for another. A swivel connection (as between a screw actuator and its operated element) is included.

(1) Note. For biased outlet elements having biasing means but not other relatively movable actuator, see subclasses 511+.

SEE OR SEARCH THIS CLASS, SUBCLASS:

177, for ambulant supports having means operated by a ground wheel to actuate movable dispenser elements.

359+, and see the notes thereto for conveyor type or movable trap chambers with relatively movable actuator.

448, for miscellaneous trap chambers having cutoffs with relatively movable actuator.

469, for dispensers with movable handles interconnected with flow controllers or closures.

470+, for containers with handles and an actuator for flow controllers or closures so related to the handle as to provide for one-handed manipulation.

481+, for flow controllers or closures for dispensers having plural openings.

503, for sectional flow controllers or closures, with the sections so interconnected that actuation of one section causes relative movement of another.

511, see note 1 above.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclasses 272+ for article dispensers having discharge assisting means with relatively movable actuators associated therewith.

251, Valves and Valve Actuation, appropriate subclasses for valve operating mechanisms; e.g., mechanical movement actuators for valves, subclasses 213+; geared, subclasses 248+; cam actuated, subclasses 251+; lever actuated, subclasses 231+; toggle actuated, subclass 280; push or pull button, subclasses 319+.

506 This subclass is indented under subclass 505. Dispensers in which there are two or more flow controllers and/or closures at least one thereof having a relatively movable actuator.

SEE OR SEARCH THIS CLASS, SUBCLASS:

476, for spaced alternately seated flow controllers or closures for a single outlet.

481+, for dispensers having plural openings and either single or plural flow controllers or closures associated therewith.

502, for sectional flow controllers or closures for single openings, the sections being movable relative to each other and to the container and each section covering part of the opening.

532, for closure type movable discharge guide with an additional flow controller or closure for the outlet with which the guide is associated.

545+, for miscellaneous single outlet dispensers with plural flow controllers or closures.

507 This subclass is indented under subclass 505. Dispensers in which the relatively movable actuator is an annular form and surrounds the container outlet.

(1) Note. Such movable actuator may be an apertured cap or a nozzle, or other form of discharge guide, for a second movable outlet element.

(2) Note. The actuated movable outlet element may have any character of motion.

508 This subclass is indented under subclass 505. Dispensers in which the movable element, located within the container, is pivoted or otherwise mounted to swing about an axis displaced from the axis of the discharge opening with which the movable element is associated. The relatively movable actuating means for such movable outlet element may have any character of motion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

535, for material discharge guides mounted to swing in the container interior to a position of use, there being no relatively movable actuator.

SEE OR SEARCH CLASS:

251, Valves and Valve Actuation, subclasses 298+ for pivoted valves.

509 This subclass is indented under subclass 505. Dispensers in which a movable outlet element (having no rotary motion) is mounted for reciprocable motion substantially along the axis of a discharge opening. The relatively movable actuating means for such movable outlet element may have any motion and may be pivotally connected to the stem of the reciprocable element.

510 This subclass is indented under the class definition. Dispensers in which the discharge outlet with its movable feed controller, closure or discharge guide is located in one wall, and an actuating rod therefor extends through the container and through a wall (or a portion of a circular wall) displaced from the wall in which the discharge opening is located.

SEE OR SEARCH THIS CLASS, SUBCLASS:

378, for aligned container, nozzle, actuator, and discharge assistant having a casing.

505+, for similar arrangements where the actuator moves relative to the movable outlet element.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 326 for systems in which a foot valve may be removed through an opening in the top of the tank; subclasses 585+ for tanks having an access opening and a foot valve.

251, Valves and Valve Actuation, subclass 144 for valves mounted on tanks in which no more tank is claimed than is necessary to mount the valve.

511 This subclass is indented under the class definition. Dispensers having resilient means biasing a movable discharge guide, a flow controller and/or a closure to a desired position.

SEE OR SEARCH THIS CLASS, SUBCLASS:

142.7, for plural compartment hand shaker type dispensers in which plural relatively movable closures have a common biasing means.

230, for biasing means that are agitators and see note 1 for the line.

313, for drum type rotors having biased discharge controllers for controlling discharge volume.

336+, for biasing means for a discharge assistant or a casing therefor.

349+, for yielding striking or clearing means for conveyor type or movable trap chambers.

449, for biasing means for trap chamber cutoffs.

491+, for biased outlet elements that are operable by the pressure of the dispensed material.

550, for devices weight biased.

505+, for biased actuators so connected to the movable outlet element as to be movable relative thereto.

SEE OR SEARCH CLASS:

215, Bottles and Jars, subclass 315 for those having tube closures and spring operated valves.

251, Valves and Valve Actuation, subclasses 336+ for biased valves not otherwise provided for.

512 This subclass is indented under subclass 511. Dispensers in which the biasing means has the sole function of increasing the resistance to material flow through a joint (contacting surfaces) between two relatively movable parts.

(1) Note. Where the biasing means either has the sole function of moving the movable element to operative (discharging) or nonoperative (nondischarging) position, or has such function in addition to the joint sealing function, see subclass 511 or other appropriate indented subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

337+, for discharge assistants with joint sealing biasing means.

490, for slitted, resilient diaphragms or nipples, the resilience of the diaphragm or nipple closing the slit.

494, for spring form, resilient or compressible flow controllers or closures that are pressure operable to open.

511, see note 1 above.

542, for packing type seals whether resilient or not where there is no additional resilient biasing means.

513 This subclass is indented under subclass 511. Dispensers in which the element biased is in the form of a movable tube or apertured cap.

SEE OR SEARCH THIS CLASS, SUBCLASS:

522+, and see the notes thereto for movable tubes, sleeves or apertured caps in other relations.

514 This subclass is indented under subclass 513. Dispensers in which the movable tube or apertured cap has a single motion of sliding along its axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

522+, for such devices without biasing means.

515 This subclass is indented under subclass 511. Dispensers in which the movable element has motions of two or more types and in definite paths.

516 This subclass is indented under subclass 511. Dispensers in which the movable element rotates about its own axis. Such motion may be less than 360 degrees.

SEE OR SEARCH THIS CLASS, SUBCLASS:

339, for biased oscillating discharge assistants.

517 This subclass is indented under subclass 511. Dispensers in which the movable element is (1) pivoted, or (2) otherwise mounted to have swinging motion.

518 This subclass is indented under subclass 511. Dispensers in which the movable element reciprocates axially of an opening through which material flows.

SEE OR SEARCH THIS CLASS, SUBCLASS:

246, for agitator combinations having the same motion.

336+, for biased discharge assistants having the same motion.

496+, for biased reciprocable outlet elements operable by the pressure of the dispensed contents.

509, for outlet elements having this motion and a relatively movable actuator.

510, for outlet elements having this motion and a rod actuator extending through the container interior and out through a wall thereof.

519 This subclass is indented under the class definition. Dispensers in which there is associated with the outlet a tube, sleeve, or apertured cap, at least one of which is constrained to have both a motion of rotation about and a motion longitudinally of its own axis. The motion must be for some purpose other than or in addition to mere attachment or detachment.

SEE OR SEARCH THIS CLASS, SUBCLASS:

522+, for axially slidable devices of this type so mounted as to be capable of being rotated about its axis if desired, but having no means that requires this motion and including those having detent means which operate by rotation after an axial sliding motion. See the notes for related art.

549+, for flow controllers or closures not of tube, sleeve or apertured cap form and having this motion.

SEE OR SEARCH CLASS:

251, Valves and Valve Actuation, subclass 325 for tubular piston valves.

520 This subclass is indented under subclass 519. Dispensers in which the contents discharge axially of the outlet end of the tube, sleeve or apertured cap.

SEE OR SEARCH THIS CLASS, SUBCLASS:

525, for such devices which do not have a constrained motion of rotation.

521 This subclass is indented under subclass 520. Dispensers in which there is a stationary plug located along the axis of the tube sleeve or apertured cap, which plug closes the passage therethrough when the tube or apertured cap is moved to one position.

SEE OR SEARCH THIS CLASS, SUBCLASS:

525, for similarly arranged plugs for slidable tubes, sleeves or apertured caps not having a constrained motion or rotation.

522 This subclass is indented under the class definition. Dispensers in which there is associated with the outlet a tube, sleeve or apertured cap, at least one of which is mounted for slidable motion along its axis.

(1) Note. This and the indented subclasses have such devices having detent means which operate by rotation of the tube, sleeve or apertured cap after completion of the sliding motion.

(2) Note. The motion must be for some purpose other than mere attachment or detachment.

SEE OR SEARCH THIS CLASS, SUBCLASS:

257+, for plural discharge assistants, one being interconnected with a movable nozzle.

320+, for nozzles interconnected with discharge assistants.

492+, for similar devices operated by the pressure of the container contents.

499, for similar devices having snap acting means to control motion.

513+, for similar devices having resilient biasing means.

519+, for similar devices having also means constraining them to axially rotary motion.

526+, for material discharge guides mounted for miscellaneous types of motions.

567+, for nozzles, spouts and pouring devices having separable means for mere attachment and detachment.

SEE OR SEARCH CLASS:

251, Valves and Valve Actuation, subclass 325 for reciprocating tubular valves, and subclasses 341+ and 349+ for valve actuation by manipulation of one of the valve components, as casing or outlet or inlet elements.

523 This subclass is indented under subclass 522. Dispensers in which the tube, sleeve or apertured cap is made up of sections telescoping over one another.

SEE OR SEARCH THIS CLASS, SUBCLASS:

379, for encased discharge assistants having either or both an outlet or inlet made of telescoping sections.

398, for dispenser containers whose contents are caused to discharge by fluid under pressure where either or both the container or its outlet are made of telescoping sections.

SEE OR SEARCH CLASS:

291, Track Sanders, subclass 45 for telescopic sand delivery pipes.

524 This subclass is indented under subclass 522. Dispensers in which there is a pin mounted on the container interior and over which the tube, sleeve, or apertured cap telescopes.

525 This subclass is indented under subclass 522. Dispensers in which discharge takes place axially of the outlet end of the tube or apertured cap.

SEE OR SEARCH THIS CLASS, SUBCLASS:

493, for such devices operable by the pressure of the material dispensed.

499, for such devices having snap acting means to control motion.

513+, for such devices having biasing means.

520+, for such devices having also means constraining them to having an axially rotary motion.

526+, for axially discharging material discharge guides having miscellaneous motions.

526 This subclass is indented under the class definition. Dispensers in which there is associated with the material outlet a material guide (1) so constructed as to be movable relative to the parts to which it is attachable, or (2) so connected to other parts as to be movable relative thereto for purposes other than mere attachment and detachment, or (3) both of the above.

(1) Note. Such devices in special combinations, of particular form or attached and movable in particular ways are in the preceding subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

74+, for interlocks between a hose or other discharge guide and some other operable part.

83, for nozzles or other material guides that have a cutter or punch associated therewith and are mounted for motion.

160+, where the dispensing container is mounted for motion.

257+, for combinations of a follower and a casing enclosed impeller, at least one

of them being interconnected with a movable nozzle.

320+, for movable nozzles interconnected with a single discharge assistant.

461, for funnel type outlets movably interconnected with a container.

507, for annular, outlet surrounding discharge guides which are movable relative to and constitute an actuator for a second movable outlet element.

522+, for axially slidable tubes, sleeves or apertured caps and see the notes thereto for related art.

567+, for nozzles, spouts and pouring devices having separable means for mere attachment and detachment purposes.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 615+ for articulated or swinging flow conduits in distribution systems.

193, Conveyors, Chutes, Skids, Guides, and Ways, appropriate subclasses, for movable chutes.

251, Valves and Valve Actuation, subclasses 149, 150, 341+, and 349+ for other moving flow pipe sections and spouts.

291, Track Sanders, subclass 31, for flexible or movable pipes operable to cut-off sand feed.

527 This subclass is indented under subclass 526. Dispensers in which the guide is constructed, arranged, and intended to be foldable, bendable, collapsible, or flexible. This may be because of either (1) the material used in, or (2) the structure of, the guide,

SEE OR SEARCH THIS CLASS, SUBCLASS:

490, for slitted, resilient diaphragms or nipples.

523, for sectional, axially telescoping, tubes, sleeves or apertured caps.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 525+ for collapsible valves.

251, Valves and Valve Actuation, subclasses 4+ for tube compressors.

291, Track Sanders, subclass 44, for flexible sand delivery pipes.

528 This subclass is indented under subclass 527. Dispensers in which a wall of the discharge guide when in one (closed) position forms a closure for the outlet opening with which the guide is associated.

SEE OR SEARCH THIS CLASS, SUBCLASS:

531+, for other closure type movable guides.

529 This subclass is indented under subclass 527. Dispensers having also a flow controller or closure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

537, and see the notes thereto for other movable discharge guide combinations with flow controller or closure.

530 This subclass is indented under subclass 527. Dispensers having some means for securing the guide in a position of nonuse.

SEE OR SEARCH THIS CLASS, SUBCLASS:

538+, and the notes thereto for other nonuse housing or securing means.

531 This subclass is indented under subclass 526. Dispensers in which a wall of the guide when in one (closed) position forms a closure for the outlet opening with which the guide is related.

SEE OR SEARCH THIS CLASS, SUBCLASS:

364, for similar structures having material trapping features.

528, for closure type movable guides that are foldable, bendable, collapsible or flexible.

536, for swingable guides having integral or attached means not forming a guiding wall and operable as a flow controller or closure.

532 This subclass is indented under subclass 531. Dispensers having an additional flow controller, closure or seal.

SEE OR SEARCH THIS CLASS, SUBCLASS:

537, and see the notes thereto for other combinations of movable discharge guides with flow controllers or closures.

533 This subclass is indented under subclass 526. Dispensers in which the discharge guide has a swinging motion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

531+, for swinging discharge guides of the closure type.

556+, for swinging closures or flow controllers, there being no movable discharge guide.

SEE OR SEARCH CLASS:

193, Conveyors, Chutes, Skids, Guides, and Ways, subclasses 17 through 23 , for swingable chutes.

291, Track Sanders, subclass 47, for pivoted nozzles.

534 This subclass is indented under subclass 533. Dispensers in which the container has a recess in a wall thereof and the guide is mounted to swing into or out of the recess.

SEE OR SEARCH THIS CLASS, SUBCLASS:

540, for stationary guides in a receptacle recess.

535 This subclass is indented under subclass 533. Dispensers in which the guide is mounted to swing from the container interior.

SEE OR SEARCH THIS CLASS, SUBCLASS:

508, for outlet elements of various kinds mounted for swinging motion inside the receptacle and having relatively movable actuating means.

536 This subclass is indented under subclass 533. Dispensers having a flow controller or closure associated with the swingable guide.

SEE OR SEARCH THIS CLASS, SUBCLASS:

537, for other combinations of movable discharge guide with flow controller or closures, and see the notes thereto.

537 This subclass is indented under subclass 526. Dispensers having a flow controller or closure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

507, for annular, outlet surrounding actuators movable (usually by axial rotation or oscillation) relative to some other movable outlet element operated thereby, the actuator frequently being a discharge guide.

522+, for axially slidable tubes, sleeves or apertured caps, many of which have flow controllers or closures associated therewith and see the notes thereto for other sleeves, tubes, or apertured caps having axial slidable, rotary or combined motions.

529, for foldable, bendable, collapsible or flexible discharge guides combined with a closure or flow controller.

531+, for movable discharge guides of closure type.

536, for swingable discharge guides with flow controller or closure.

544+, for miscellaneous flow controllers or closures.

538 This subclass is indented under the class definition. Dispensers having some means for securing the dispensing guide in some position other than the position in which it functions as an outlet.

SEE OR SEARCH THIS CLASS, SUBCLASS:

74+, where, in the position of nonuse, the discharge guide interlocks with some means for controlling or causing discharge.

475, where the handle is the nonuse housing or supporting means.

526+, and see the Notes thereto for movably mounted material discharge guides, many of which are so mounted as to be movable to a nonuse position, e.g., to a housed position.

540, for outlets seated in a receptacle recess.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 338 and 343 for supply means having funnels requiring separation from the said supply for use.

248, Supports, subclass 79, for receptacle attached hose and/or nozzle supports.

539 This subclass is indented under subclass 538. Dispensers in which the dispensing outlet is detachable from the container, in order to be reversed in position and reattached to the container, extending thereinto.

540 This subclass is indented under the class definition. Dispensers in which the dispensing outlet is seated in a recess formed in the container exterior.

SEE OR SEARCH THIS CLASS, SUBCLASS:

534, for guides mounted to swing into a container recess.

541.1 WITH FRANGIBLE CLOSURE FOR OUTLET:

This subclass is indented under the class definition. Subject matter having a closure for an outlet of the dispenser intended to be broken, torn, cut, or punched for opening the same.

SEE OR SEARCH THIS CLASS, SUBCLASS:

5, and 80+, for a cutter in combination with a punch for opening such closure.

153.1+, for a fastening seal.

532, for a closure-type movable material guide combined with such closures.

542, for a packing-type seal that is not frangible.

SEE OR SEARCH CLASS:

215, Bottles and Jars, subclass 32 for a breakable receptacle neck and subclasses 250+ for a frangible bottle or jar closure.

220, Receptacles, subclasses 89.1+ and 265+ for a structure of this kind where no dispensing feature is claimed.

221, Article Dispensing, subclass 302 for an article dispensing device having a frangible element for the outlet.

229, Envelopes, Wrappers, and Paperboard Boxes, subclasses 200+ for a container structure to tear, cut, or break the container cover material.

541.2 With cutting or punching or with cutter or puncher accommodating means:

This subclass is indented under subclass 541.1. Subject matter wherein the closure or a portion thereof, is constructed to be severed or ruptured by a cutting or rupturing operation, or constructed to receive a cutting or rupturing tool.

SEE OR SEARCH CLASS:

30, Cutlery, subclasses 400+ for a can opening device which is a cutting implement and which may be mounted on the can for the cutting operation but which is completely disassociated from the can to empty the can.

221, Article Dispensing, subclasses 30+ for an article dispensing device including or combined with a cutter or punch means to form an outlet opening in a supply receptacle or the wrapper therefor.

541.3 Closure or closure portion broken by pressure of container content:

This subclass is indented under subclass 541.1. Subject matter wherein the closure or a part thereof is broken, torn, ruptured, or separated by the pressure of a dispensing material within the container.

SEE OR SEARCH THIS CLASS, SUBCLASS:

491+, for an outlet element that is not frangible but is movable by the pressure of the content in the dispenser.

541.4 About line or point of weakness:

This subclass is indented under subclass 541.3. Subject matter wherein the tear, rupture, or separation occurs about a predetermined line or point of weakness.

541.5 Having reusable closure:
This subclass is indented under subclass 541.1. Subject matter wherein the frangible closure is reused to close the outlet of the dispenser.

541.6 About line or point of weakness:
This subclass is indented under subclass 541.1. Subject matter wherein the break, tear, or cut occurs about a predetermined line or point of weakness.

SEE OR SEARCH THIS CLASS, SUBCLASS:
541.4, for a closure or a closure portion broken about a line or point of weakness by the pressure of container content.

SEE OR SEARCH CLASS:
215, Bottles and Jars, subclasses 250+ for a frangible closure under that class definition.
220, Receptacles, subclasses 266+ for a frangible closure about a line or point of weakness.

541.7 Adapted for engagement with special tool (e.g., slotted key):
This subclass is indented under subclass 541.6. Subject matter wherein the closure element or portion thereof is constucted to accommodate a distinct or special tool such as a slotted key.

SEE OR SEARCH CLASS:
220, Receptacles, subclasses 274+ for a frangible member with gripping means having a special tool.

541.8 Tool serves as closure:
This subclass is indented under subclass 541.7. Subject matter wherein the tool is used for providing a cover for the outlet of the dispenser.

SEE OR SEARCH CLASS:
220, Receptacles, subclass 278 for a puncturing tool which serves as a closure.

541.9 With integral gripping means (e.g., pull tab):
This subclass is indented under subclass 541.6. Subject matter comprising a member formed as a unit with the closure element and adapted to be firmly grasped for opening the closure.

SEE OR SEARCH THIS CLASS, SUBCLASS:
153.7+, for a frangible fastening seal having a pull tab.

542 This subclass is indented under the class definition. Dispensers in which packing, gasket, or sealing material is provided for joints, closures or flow controllers to prevent or reduce leakage.

SEE OR SEARCH THIS CLASS, SUBCLASS:
512, for resilient means exerting a joint sealing bias only.
541.1+, for frangible seals.

SEE OR SEARCH CLASS:
215, Bottles and Jars, subclasses 341+ for closures with packing type seal.
220, Receptacles, subclass 378 for packing type seals.
277, Seal for a Joint or Juncture, for a generic sealing means or process, subclasses 345+ for a seal between relatively movable parts (i.e., a dynamic seal) or subclasses 628+ for a static contact seal for other than a an internal combustion engine, or a pipe, conduit, or cable.

543 This subclass is indented under the class definition. Dispensers in which an otherwise separable element is retained on the container through the medium of single cord, wire, or other strand form connector. The wire may be stiff and pivotally or otherwise connected to the container.

SEE OR SEARCH CLASS:
220, Receptacles, subclass 375, for similar holding means for closures, there being no dispensing features claimed.

544 This subclass is indented under the class definition. Dispensers having a flow controller or closure for the discharge outlet.

(.5) Note. Outlet arrangements which operate to vary the flow of material though not capable of cutting it off entirely are included.

(1) Note. The preceding subclasses having such devices with the specific additional characteristics there provided for. The following (not exhaustive) are specially mentioned).

SEE OR SEARCH THIS CLASS, SUBCLASS:

14+, for cutoffs operable by selectively preset volume or rate of flow responsive mechanism.

23+, for recorders, register, indicator signal or alarm combinations.

52+, for automatic control combinations.

70, for combinations involving timing mechanism.

76, for electrical controls.

92+, for combinations with collapsible wall receptacles where characteristics of the collapsible wall are claimed or other features are claimed which are present because of the collapsible wall. Where the collapsible wall is merely claimed by name, the patent is classified with the subcombination specifically recited.

110, for drip, leakage, or waste catching or disposal including a valved return to the main supply.

153.01+, for lock or fastening seal combinations.

162, for movably mounted supply receptacles which move relative to a discharge controlling valve.

187, for wick or absorbent material feed for dispensing devices in which the wick or absorbent material controls the discharge.

196.1+, for hand manipulable shaker type dispensers having outlet elements which may have impact on the container or contents, especially subclass 196.4, for those having an element caged in the outlet, which element is a ball acting as a closure when the shaker is at rest.

212+, for resilient wall dispensers with flow controllers or closures.

226+, for flow controllers interconnected with an agitator.

310+, for flow controllers associated with discharge assistants to vary discharge volume.

354, for relatively movable cutoffs carried by movable trap chambers.

355, for cutoffs, interconnected with movable trap chambers for operation.

380, for valved outlets for casing enclosed discharge assistants which are associated with a material supply chamber.

387, for containers having followers and a valved outlet.

420, for drop forming outlet devices especially 422 for such devices with valves.

425+, for trap chambers having cutoffs where more than the mere outlet with its flow controller and/or closure is claimed.

469, for movable handles interconnected with flow controllers or closures.

470+, for a handle and actuator for a flow controller or closure juxtaposed for one-handed manipulation.

476, and the subclasses following the same and preceding subclass 544, for flow controllers and closures in the special combinations or of the particular types provided for.

SEE OR SEARCH CLASS:

138, Pipes and Tubular Conduits, subclasses 40+ for flow restrictors in pipes and tubular conduits.

184, Lubrication, subclasses 65+ for gravity 65+ feed lubricators, subclass 69 having a cutoff (usually a ball) that opens due to vibration of the device with which the lubrication is used.

193, Conveyors, Chutes, Skids, Guides, and Ways, subclasses 20, 21 for vertically swingable valved chutes.

220, Receptacles, subclasses 200+ closures for recptacles having no dispensing features and see the notes to subclass 200 for the distribution of the closure arts.

221, Article Dispensing, subclasses 289+ for article dispensing devices having closure or other means to effect mechanical release or separation of articles.

251, Valves and Valve Actuation, subclasses 142+ for flow path devices with a single valve, especially subclass 144 for tank mounted valves.

545 This subclass is indented under subclass 544. Dispensers having (1) two or more discharge controllers or closures for a single discharge outlet, or (2) either single or plural controllers or closures carried by an element (as a spout) separably attached to the receptacle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

425+, for plural flow controllers or closures associated with trap chambers.

476, for spaced alternately seated flow controllers or closures for a single outlet.

482+, for plural flow controllers or closures associated with receptacles having plural openings.

502+, for flow controllers or closures formed of two or more sections which each covers part of the outlet area.

506, for plural flow controllers or closures, for a single outlet at least one of which has a relatively movable actuator.

532, for plural flow controllers or closures one of which is a closure type discharge guide.

541.1+, for plural flow controllers or closures one of which is frangible.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 613+ for a single flow path system having plural serial valves.

220, Receptacles, subclasses 253, 254.1, 255, and 256.1, for plural closures not associated with dispensing features.

546 This subclass is indented under subclass 545. Dispensers in which a cap, i.e., a closure element which has an annular flange which surrounds the outlet neck and carriers a plug (surrounded by the flange) that enters the outlet axially.

SEE OR SEARCH THIS CLASS, SUBCLASS:

408.5, for agitator rigidly mounted on movable closure.

551, for screw caps without axial plugs.

562, for miscellaneous caps without plugs.

547 This subclass is indented under subclass 544. Dispensers having means within the receptacle or within the outlet for guiding, distributing, restricting or directing the gravity flow of the material toward the outlet. The means may comprise a baffle having either single or plural perforations therein, and the closure or discharge controller may be associated with the baffle rather than the outlet.

SEE OR SEARCH THIS CLASS, SUBCLASS:

564, and see the notes thereto for other interior material guides, distributors or restrictors.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclasses 590+ for flow guides in the interior of a tank.

251, Valves and Valve Actuation, subclasses 118+ for valves associated with flow guides or restrictors within the flow line.

548 This subclass is indented under subclass 544. Dispensers in which the movable feed controller or closure element has a motion of rotation about its own axis. Such motion may be less than 360 degrees.

SEE OR SEARCH THIS CLASS, SUBCLASS:

142.9, for rotary flow controllers associated with plural compartment dispensers of the hand manipulable shaker type.

516, for rotary flow controllers or closures with resilient biasing means.

SEE OR SEARCH CLASS:

215, Bottles and Jars, subclass 313 for tube type closures with rotary valves.

251, Valves and Valve Actuation, subclasses 304+ for rotary valves.

549 This subclass is indented under subclass 548. Dispensers in which the feed controller or closure also moves longitudinally of its own axis.

SEE OR SEARCH THIS CLASS, SUBCLASS:

489, for screw type flow controllers or closures for a single passage into which plural passages merge.

519+, for combined rotary and axially movable tubes, sleeves and apertured caps.

SEE OR SEARCH CLASS:
251, Valves and Valve Actuation, subclasses 215+ and 264+ for screw actuated valves.

550 This subclass is indented under subclass 549. Dispensers having an additional element so connecting the flow controller or closure to the receptacle as to provide for a swinging motion thereof in addition to the axially rotary and longitudinal motion.

SEE OR SEARCH CLASS:
220, Receptacles, subclasses 329+, for receptacle closures having this combined motion not having dispensing features.

551 This subclass is indented under subclass 549. Dispensers having a nonapertured screw cap, i.e., the closure element has an annular, internally screw-threaded flange that surrounds and screws onto the outlet neck.

SEE OR SEARCH THIS CLASS, SUBCLASS:
489, for screw caps for closing a single passage into which plural passages merge.
519+, for apertured screw caps having axial and longitudinal motion.
546, for screw caps with an axial plug.
553, for other axially rotary caps.
562, for caps other than the screw type.
568, for nozzles, spouts and pouring devices with screw attaching means.

SEE OR SEARCH CLASS:
215, Bottles and Jars, subclass 329 for screw caps.
220, Receptacles, subclasses 288+ for screw caps.

552 This subclass is indented under subclass 549. Dispensers in which the dispensing opening is filled by a plug or disc which screws thereinto.

SEE OR SEARCH THIS CLASS, SUBCLASS:
551, for screw caps and see the notes thereto.
554, for other types of axially rotary plugs.
563, for miscellaneous plugs.

SEE OR SEARCH CLASS:
215, Bottles and Jars, subclasses 356+ for screw plug closures and subclass 314 for tube type closures with screw valves.
220, Receptacles, subclasses 288+ for screw plug closures.

553 This subclass is indented under subclass 548. Dispensers in which the movable element is in the form of an apertured sleeve, tube or cap which is mounted either outside or inside of the flange or neck that surrounds the discharge opening, and in which the structure provides for discharging the material in some direction other than along or parallel to the axis of rotation.

SEE OR SEARCH THIS CLASS, SUBCLASS:
519+, for apertured tubes, sleeves or caps having both axially rotary and longitudinal motion.

554 This subclass is indented under subclass 548. Dispensers in which the rotary element is of plug form.

SEE OR SEARCH THIS CLASS, SUBCLASS:
507, for plugs for closing outlets that have an annular, outlet surrounding, relatively movable actuator.
546, for cap carried axial plugs.
552, for screw plugs.
563, for miscellaneous plug closures.

SEE OR SEARCH CLASS:
251, Valves and Valve Actuation, subclasses 309+ for rotary plug valves.

555 This subclass is indented under subclass 548. Dispensers in which the axially rotary member is held in place by flanges and/or plates located on opposite faces of the rotary member. The flanges may be formed by upsetting or grooving the stationary parts.

SEE OR SEARCH THIS CLASS, SUBCLASS:

561, for similarly mounted reciprocable elements.

556 This subclass is indented under subclass 544. Dispensers in which the flow controller or closure is pivoted to the receptacle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

508, for swingable outlet elements mounted in the receptacle interior and having relatively movable actuating means.

533, for swingable material discharge guides.

SEE OR SEARCH CLASS:

220, Receptacles, subclasses 334+ for swingable closures.

251, Valves and Valve Actuation, subclasses 298+ for pivoted valves.

291, Track Sanders, subclass 35.

557 This subclass is indented under subclass 556. Dispensers in which the pivoted element swings about an axis displaced from and parallel to the axis of the opening controlled, and thus swings in a single plane transversely of the axis of the opening controlled.

558 This subclass is indented under subclass 556. Dispensers in which the pivoting means is of bail form, i.e., of U-form, the ends of the legs of the U being pivoted to the receptacle, the closure or flow controller either forming or being connected to the bend of the U.

559 This subclass is indented under subclass 544. Dispensers in which the movable element is of nonpivoted type and is mounted for guided reciprocable motion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

142.8, for reciprocating closure elements associated with plural compartment dispensers of the hand manipulable shaker type.

447, for trap chambers having reciprocating, nonrigidly interconnected cutoffs.

453, for trap chambers having reciprocating, rigidly interconnected cutoffs for both inlet and outlet.

495+, for reciprocating movable outlet elements operably by pressure of the container contents.

509, for movable outlet elements reciprocable axially of the outlet and having relatively movable actuating means.

510, for reciprocable outlet elements having a rod actuator extending through a container wall and the container interior to the element.

518, for reciprocable outlet elements with resilient biasing means.

522+, and see the notes thereto for axially movable tubes, sleeves or apertured caps.

SEE OR SEARCH CLASS:

220, Receptacles, subclasses 345.1+ for a sliding closure.

251, Valves and Valve Actuation, subclass 318 for reciprocating valves for flow devices not elsewhere provided for.

291, Track Sanders, subclass 34.

560 This subclass is indented under subclass 559. Dispensers in which the movable, nonpivoted, element reciprocates in an arcuate path.

561 This subclass is indented under subclass 559. Dispensers in which a movable element is held in place by flanges and/or plates located on opposite faces of the movable element. The flanges may be formed by upsetting or otherwise grooving the stationary part.

(1) Note. Closures or flow controllers having their side edges bent down and then in toward the axis of reciprocation, the reentrant portion of the flanges engaging under guiding or holding flanges, entering guiding and holding grooves, are in subclasses 559 or 560.

SEE OR SEARCH THIS CLASS, SUBCLASS:

555, for similarly mounted rotary elements.

559, see note 1.

560, see note 1.

562 This subclass is indented under subclass 544. Dispensers in which the dispensing opening is closed by a cap, i.e., by a closure element having an annular flange surrounding the outlet neck.

SEE OR SEARCH THIS CLASS, SUBCLASS:
- 546, for caps carrying a plug that enters the opening axially when the cap is applied.
- 551, for screw caps.

SEE OR SEARCH CLASS:
- 137, Fluid Handling, subclass 800 for closures for flow devices.
- 215, Bottles and Jars, subclasses 316+ for cap closures.
- 220, Receptacles, subclasses 796+ for caps of the slip type, i.e., held in place by friction.

563 This subclass is indented under subclass 544. Dispensers in which the dispensing opening is filled by a plug.

SEE OR SEARCH THIS CLASS, SUBCLASS:
- 552, for screw plugs.
- 554, for rotary plugs.

SEE OR SEARCH CLASS:
- 215, Bottles and Jars, subclasses 355+ for plug closures.

564 This subclass is indented under the class definition. Dispensers in which material guide, distributors or restricting means are on the interior of the container. The material may be directed toward or away from the outlet, or distributed or restricted or held back from free access thereto, baffles having either single or plural openings therein and splash guards being included.

(1) Note. The formation of the container walls in such a way that they direct material from the receptacle interior toward the opening, or container walls formed with grooves or channels for so directing material are treated as nozzles, spouts and pouring devices for subclasses 566+. The interior discharge guide for subclass 564 must be in addition to such structure.

SEE OR SEARCH THIS CLASS, SUBCLASS:
- 142.4, for plural source hand manipulable shakers having interior baffles to hinder discharge from one source when material from another source is being dispensed.
- 189.06+, for foraminous baffles in dispensing passages where the baffle functions as a strainer, as in teapots having a strainer in the spout.
- 270, for interior material discharge guides between discharge assistants arranged in sets.
- 328, for material discharge guides on the container side of discharge assistants.
- 377, for inlet traps for material supply container having an encased discharged assistant.
- 457.5, for hand shaker type dispensers having an outlet passage which extends from the outlet of the supply container in a direction reverse to the travel of the material toward the outlet, so that the material dispensed travels through a generally U-shaped path within the supply container and through the passage to its outlet.
- 547, for interior material discharge guides distributors or restrictors for containers having flow controllers or closures associated with either the baffle or the outlet.
- 565, for foraminous or plural opening pattern type outlets.
- 566, see note above.

SEE OR SEARCH CLASS:
- 137, Fluid Handling, subclasses 590+ for flow guides in the interior of a tank.
- 221, Article Dispensing, subclass 312 for article dispensing devices including interior article guiding means.

565 This subclass is indented under the class definition. Dispensers in which the only dispensing feature claimed, pertains to the sifter or sprinkler or other plural opening patter form outlet.

(1) Note. An outlet of plural opening pattern form may be of any foraminous

nature and need not be for sifting or sprinkling purpose.

(2) Note. Since the type of outlet provided for in this subclass has been treated as a single outlet, patents having this type of outlet appear in numerous preceding subclasses which provide for special characteristics or combinations of which this type opening may be a part. For the line between this type of opening and the plural openings of subclasses 478+, see the notes to subclass 478. Some of the preceding subclasses will be separately noted below.

SEE OR SEARCH THIS CLASS, SUBCLASS:

478, see note 2 above.
480, for hand manipulable shaker or dredge top type and see the notes thereto.
511+, for combinations with resilient biasing means.
547, for a plural opening pattern type flow distributor or restrictor within a container having an outlet with a closure or discharge controller.
548, and 555, for axially rotary flow controllers or closures.
555, see reference to 548.
559+, for reciprocably attached flow controllers or closures.
564, for baffles comprising a flow restrictor or distributor within a container at a point removed from the outlet. Both the baffle and the outlet may be either the single or plural opening type.

SEE OR SEARCH CLASS:

55, Gas Separation, particularly subclasses 490+ and those following for gas filters.
209, Classifying, Separating, and Assorting Solids, for sifters, particularly subclasses 233+.
239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 374 and 376+ for gravity feed or shaker type sprinklers or sprayers, and subclasses 266+ for sprinkler pipes.

566 This subclass is indented under the class definition. Dispensers in which the only dispensing feature claimed pertains to the nozzle, spout, pouring lip or other material pouring guide, including the mode of connection to the receptacle. These are herein generically called pouring devices.

(1) Note. This subject matter appears throughout the class in the combinations and in the special forms provided for in the preceding subclasses, some being specially noted below.

(2) Note. See Lines With Other Classes and Within This Class, Puncturing Injectors and Other Nozzles, Spouts, and Pouring Devices, in the main class definition for notes to other classes having related nozzle, spout, and pouring device art.

SEE OR SEARCH THIS CLASS, SUBCLASS:

80, for cutter or punch type.
475, where the spout also functions as the container handle.
478+, for containers having plural openings and plural nozzles, spouts, and pouring devices and see the notes to such subclasses for related art.
526+, for nozzles, spouts and pouring devices movably connected to the receptacle for purpose other than mere attachment or detachment, and see the notes thereto for related art.
538+, and see the notes thereto for non-use housing or securing means.
544+, for combinations with a flow controller or closure, and see the notes.
564, for interior material guides.
565, for sifter, sprinkler or plural opening patterns.
575, for outlet shapes.

SEE OR SEARCH CLASS:

137, Fluid Handling, subclass 801 for flow devices comprising nozzles or spouts.

567 This subclass is indented under subclass 566. Dispensers having means to separably attach the pouring device to the receptacle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

89+, where a cutter or punch is claimed as part of the combination.

526+, and see the notes thereto for nozzles, spouts and pouring devices connected for motion for purposes other than for mere attachment or detachment.

538+, and see the notes thereto for means for securing discharge guides in a nonuse position.

543, for single strand, cord, or wire connectors for removable outlet elements.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 338 and 343 for supply means having funnels requiring separation from the said supply for use.

285, Pipe Joints or Couplings, subclasses 154.1+ for a coupling between a pipe and box, subclasses 136.1+ for pipe-to-pipe-to-plate couplings, and subclasses 189+ for an end-to-side or plate coupling.

568 This subclass is indented under subclass 567. Dispensers in which the attaching means is of the screw type.

SEE OR SEARCH THIS CLASS, SUBCLASS:

91, for such screw connectors combined with a cutter or punch.

519+, for screw type connectors for tube, sleeve or apertured cap movable outlets involving functions more than mere attachment or detachment.

549+, for screw type flow controllers and closures.

SEE OR SEARCH CLASS:

285, Pipe Joints or Couplings, subclasses 206+ for a screw clamp type sput-to-plate joint, and subclasses 219+ for a pipe screw coupled to a plate.

569 This subclass is indented under subclass 567. Dispensers in which the pouring device has a portion engaging the exterior of a receptacle wall and a second portion which engages the interior thereof.

SEE OR SEARCH THIS CLASS, SUBCLASS:

90, for similar mounting means in combination with a cutter or punch.

570 This subclass is indented under subclass 567. Dispensers in which the pouring device engages the rim of a receptacle opening, either the pouring device or such rim having a groove, and the other part having a bead or flange that enters the groove.

SEE OR SEARCH CLASS:

220, Receptacles, subclasses 703+ for an attachment to a receptacle intended to aid in drinking from the receptacle.

571 This subclass is indented under subclass 566. Dispensers , the pouring device having integral or added means formed with a surface or configuration adapted to prevent dropping of residues remaining at the edge of the pouring device after the desired dispensing operation is completed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

108+, for drip, leakage or waste catching or disposal.

572 This subclass is indented under subclass 566. Dispensers in which the pouring device is formed integrally with a wall of the container, i.e., is formed from the same piece of material with a joint.

SEE OR SEARCH THIS CLASS, SUBCLASS:

462, for integral, funnel type outlets.

573 This subclass is indented under subclass 566. Dispensers in which (1) the pouring device has some reinforcing means in addition to mere shape of the device, as grooves or corrugations, or (2) there is a brace extending from the pouring device to the receptacle wall.

SEE OR SEARCH THIS CLASS, SUBCLASS:

574, for folded seams, even though they have a reinforcing function.

574 This subclass is indented under subclass 566. Dispensers in which any or all of (1) the receptacle body, (2) the pouring device, or (3) the joint between the two, involve a folded seam.

SEE OR SEARCH CLASS:
220, Receptacles, subclasses 610+ and 677+.

575 This subclass is indented under the class definition. Dispensers not hereinbefore provided for.

(1) Note. For example, in this subclass are accumulated, as originals and cross-references, dispenser outlet shapes of types not provided for in preceding subclasses as set forth in notes below.

(2) Note. The various classes which provide for shaping extrudable plastics (such as metal, earthenware, etc.) have patents on shapes of outlets to impart desired shape to the plastic. For such art, see the notes to Sec. 14 of the main class definition.

SEE OR SEARCH THIS CLASS, SUBCLASS:
478+, for dispensers having two or more openings, at least one being a dispensing opening, particularly subclass 480 for hand manipulable, shaker type dispensers having plural openings of different characteristics in the top thereof.
480, see the reference to subclass 478 above.
490, for slitted resilient diaphragms or nipples.
565, for sifter, sprinkler or plural opening patterns.
566+, for nozzles, spouts, or pouring devices. Such devices as have an unusual outlet shape are cross-referenced down to subclass 575.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclass 802 for miscellaneous flow devices including especially outlet shapes and/or deflectors and flow conduits not otherwise classified.

576 This subclass is indented under the class definition. Dispenser in which the supply container is adapted to store ink and in which the trap chamber is a dip well accessible to the penpoint of a pen for the removal of a quantity of ink therefrom.

(1) Note. Related subject matter, as between dispensing inkwells (in this, and in the indented subclasses) and dispensers of general utility (in existing subclasses therebelow), is tabulated as follows:

Inkwell subclass	General utility dispenser subclass
576	424.5+ (except 457)
577	160+, 173+
578	205
583	361+
585	457

(2) Note. A patent to a dispensing inkwell, the original of which is classified in subclasses 576+, as a rule, has been added as a cross-reference in the appropriate subclass, from 129+ to 424, if it is not included in the above-listed loci for general dispensers. It is expected that this procedure will be followed as to future placement.

SEE OR SEARCH CLASS:
15, Brushing, Scrubbing, and General Cleaning, subclasses 257.07+ for an inkwell which includes a supply of ink and a chamber or zone accessible to a penpoint for removal of ink, which inkwell is not a dispenser because the chamber or zone is not a trap chamber; see, particularly, subclass 257.072 for an inkwell including a diaphragm-type discharge assistant for moving ink from the supply to such a nontrapping chamber or zone, and subclass 257.076 for such a nontrapping chamber or zone formed along the bottom wall of the inkwell.
108, Horizontally Supported Planar Surfaces, subclass 26.2 for an inkwell which is not a dispenser and which is attached to a desk.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclass 20.5 for the fluent-material-handling combination of a source of supply (e.g., ink) and a coacting receiver which is a dispenser (e.g., fountain pen), which, upon being supplied with ink, is removed from the source for independent use remote from the receiver; and see (1) Note thereto for the distinction between comparable combinations of that class (141) and Class 401, Coating Implements With Material Supply.

215, Bottles and Jars, and 220, Receptacles, appropriate subclasses, for ink receptacles which are not dispensers for this class (222) nor include means facilitating loading of a pen for Class 15, Brushing, Scrubbing, and General Cleaning, subclasses 257.07+.

577 This subclass is indented under subclass 576. Dispenser combined with support means therefor.

SEE OR SEARCH THIS CLASS, SUBCLASS:

160+, and 173+, for general utility dispensers combined with support or casing structure therefor.

SEE OR SEARCH CLASS:

211, Supports: Racks, subclasses 69.2+ for a (nondispensing) inkstand and penrack, combined.

248, Supports, subclasses 128+ for a stand for a movably related nondispensing ink receptacle, and subclasses 146+ for a stand on which such a receptacle is immovably mounted.

578 This subclass is indented under subclass 576. Dispenser provided with means, including an element movable relative to the supply container, for moving ink from a point in the supply container to a level, at the dip well inlet or feed means outlet portion, which is higher than said point.

SEE OR SEARCH THIS CLASS, SUBCLASS:

205, for a dispenser of general utility including nongravity feed to a trap for manual removal of material.

579 This subclass is indented under subclass 578. Dispensers in which the feed means includes a conduit from the supply which has a discharge portion which commences at a higher level than the dip well for discharge thereinto or which terminates at an opening through a wall of the chamber sufficiently higher than the bottom thereof so as to trap a predetermined volume of ink above said bottom.

580 This subclass is indented under subclass 578. Dispenser in which the nongravity feed means includes a discharge assistant which supports or is integral with the dip well to constitute a conjointly movable unit therewith for moving the ink.

(1) Note. This, and the indented, subclasses include patents to inkwell dispensers wherein movement of the discharge assistant is actuated by the force of the application of a penpoint thereto or to the dip well; see, also, subclass 589, for a penpoint-opened closure or valve at the pen-entry outlet of the dip cup of a barometric dispensing inkwell.

SEE OR SEARCH THIS CLASS, SUBCLASS:

578, for a discharge assistant which, in the inactive position thereof, constitutes only the bottom wall of the dip well.

581 This subclass is indented under subclass 580. Dispenser in which the discharge assistant comprises a resilient wall which supports the dip cup so as to be resiliently flexed (as when movement is imparted to the dip well), to cause the feed of ink.

SEE OR SEARCH THIS CLASS, SUBCLASS:

578, for a diaphragm-type discharge assistant which constitutes only the bottom wall of the dip well.

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning, subclass 257.072 for an inkwell including implement-actuated diaphragm means to force a quantity of ink from the main body of the supply to a removal zone, which zone is not a trap chamber because the ink recedes back into the supply due to the incapacity of the zone to retain the ink.

582 This subclass is indented under subclass 580. Dispenser in which the conjointly movable unit is buoyant or otherwise biased for movement to return the unit to its starting position.

583 This subclass is indented under subclass 576. Dispenser in which the dip well is supported for movement, relative to the supply container, between a position wherein an inlet wall portion thereof is below the level of the supply in the container, to receive a supply of ink, and another position above said level, for access by a penpoint.

584 This subclass is indented under subclass 576. Dispenser in which the dip well is so connected to the supply container that the entire organization must be tilted to fill the trap, which organization is then righted for access of a penpoint to the dip well.

SEE OR SEARCH THIS CLASS, SUBCLASS:

454, for a dispenser organization of general utility which, in its entirety, is tilted to fill the trap and tilted again for dispensing.

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning, subclass 257.076, for an inkwell including a zone accessible to, and particularly useful for, loading a penpoint when the inkwell is in a stable tilted position or other stable position angularly related to a first, similarly stable position.

585 This subclass is indented under subclass 576. Dispenser in which the dip well provides the sole dispensing outlet from the supply container, and the container is otherwise airtight; whereby establishment of a level of ink in the dip well to bridge said outlet serves, by atmospheric pressure, to prevent further flow of a ink thereinto and removal of ink by means of a penpoint permits resumption of a corresponding increment of flow of ink into said dip well.

SEE OR SEARCH THIS CLASS, SUBCLASS:

457, for barometric dispensers of general utility; and see the search notes thereto.

SEE OR SEARCH CLASS:

401, Coating Implements With Material Supply, subclass 120, for the combination of a barometric inkwell and a pen.

586 This subclass is indented under subclass 585. Dispenser including a base within which the dip well is formed, and a removable receptacle retained upon the base with its discharge opening lowermost to constitute the supply container.

587 This subclass is indented under subclass 586. Dispenser provided with means including an element which is positioned to close the outlet of the supply container or to interrupt flow between the container and the dip well, which element is displaceable, while the container is supported on the base, to a flow-establishing position; or is displaceable to a flow-establishing position by contact with an element of the base during the act of associating the container therewith.

588 This subclass is indented under subclass 585. Dispenser in which the penpoint-receiving entrance to the dip well is at a height below that of the uppermost portion of the supply container to which ink is capable of rising, in the normally-supported use position of the dispenser.

589 This subclass is indented under subclass 588. Dispenser including displaceable or removable means for closing the penpoint-receiving outlet portion of the dip well.

(1) Note. The provision of a vent through the valve or closure will not bar placement of a patent in this subclass.

SEE OR SEARCH CLASS:
15, Brushing, Scrubbing, and General Cleaning, subclass 257.075, for implement-opened access means to an inkwell which is not a dispenser.

590 This subclass is indented under subclass 1. Processes relating to dispensing molten metal.

591 This subclass is indented under the class definition. Apparatus for discharging molten metal from a receptacle or the like.

(1) Note. See the main class definition of Class 266 for the line between that class (266) and subclasses 590 and 591+.

SEE OR SEARCH CLASS:
65, Glass Manufacturing, subclasses 324+ for similar devices for dispensing glass.

592 This subclass is indented under subclass 591. Apparatus provided with heat exchange means.

(1) Note. Heating a receptacle to either melt or maintain metal in a molten state is considered to be treating and proper subject matter for Class 266. However, heating at the nozzle or vicinity thereof of a receptacle to perfect the dispensing function is considered proper subject matter for Class 222.

593 This subclass is indented under subclass 592. Apparatus wherein the heat exchange means includes a heating means.

594 This subclass is indented under subclass 591. Apparatus for evacuating molten metal from the receptacle either by regulating its flow through an exit opening or by the action of a discharge assistant acting thereon.

(1) Note. For a definition of a discharge assistant, see Lines With Other Classes and Within This Class, Discharge Assistants (e.g. Impellers, Pumps, Conveyors, and Movable Traps in the main class definition of this class (222).

595 This subclass is indented under subclass 594. Apparatus wherein the molten metal is evacuated from the receptacle by the action of a pressurized gaseous fluid acting thereon.

596 This subclass is indented under subclass 594. Apparatus wherein the flow of molten metal is regulated by the action of a movable wall of an expansible chamber device, the movable wall directly engaging the molten metal.

597 This subclass is indented under subclass 594. Apparatus wherein the evacuation of the molten metal from the receptacle is regulated by a flow stop means at the opening either removable therefrom or movable to a position allowing for molten metal egress.

598 This subclass is indented under subclass 597. Apparatus wherein the flow stop means is moved about an axis to a position allowing for molten metal egress.

599 This subclass is indented under subclass 598. Apparatus wherein the flow stop means is moved about an axis substantially at right angles to the direction of molten metal flow.

600 This subclass is indented under subclass 597. Apparatus in which the flow stop means is linearly moved in a direction transverse to the direction of molten metal flow through the receptacle opening, movement of the flow stop means regulating molten metal flow.

601 This subclass is indented under subclass 597. Apparatus wherein the flow stop means is regulated or adjusted by an apparatus, at least part of which is beneath the pour opening.

602 This subclass is indented under subclass 597. Apparatus wherein the flow stop means is regulated or adjusted by an apparatus, at least part of which is above the pour opening.

603 This subclass is indented under subclass 591. Apparatus in which a gas is introduced at, about or downstream of an exit opening of the receptacle, the gas having intimate contact at some time with the molten metal.

(1) Note. The gas may cool, lubricate or otherwise enhance the dispensing of the molten metal. However, such a gas, if it should react with the molten metal or otherwise provide a claimed treatment, e.g., agitation, to the molten metal in the receptacle it would then be considered proper subject matter for classification in Class 266.

604 This subclass is indented under subclass 591. Apparatus wherein the receptacle is canted or otherwise caused to move so that an upper portion thereof is lowered to allow molten metal to flow thereover whereby to evacuate the receptacle.

(1) Note. The evacuating receptacle may either receive a charge of molten metal or be dipped into a vessel containing molten metal to be charged thereby.

605 This subclass is indented under subclass 604. Apparatus wherein the receptacle is provided with an elongate passage generally vertically disposed having an inlet to the receptacle and an outlet through which molten metal flows when being evacuated from the receptacle.

606 This subclass is indented under subclass 591. Apparatus wherein in addition to the nozzle or opening of the receptacle from which molten metal is evacuated there is provided a funnel, tube or like beneath the receptacle for conducting or otherwise perfecting flow of molten metal exiting therefrom.

607 This subclass is indented under subclass 606. Apparatus wherein the funnel, tube or the like is separate from the receptacle.

608 Ambulant:
This subclass is indented under subclass 173. Device provided with wheels, skids, or other special means to facilitate translation of the device over the surface on which it rests.

(1) Note. This includes such dispensers so mounted as to move within a jacket.

SEE OR SEARCH THIS CLASS, SUBCLASS:

160+, where the supply container is mounted for motion on the ambulant support.

SEE OR SEARCH CLASS:

16, Miscellaneous Hardware, subclasses 18+ for casters.

105, Railway Rolling Stock, subclasses 239+ for dumping freight cars.

111, Planting, subclasses 25+ and 34+ for planting apparatus, usually vehicular, involving dispensing.

137, Fluid Handling, subclasses 125, 267 and 899+ for vehicle carried fluid handling systems.

169, Fire Extinguishers, subclasses 52+ for movably mounted extinguishers.

180, Motor Vehicles, appropriate subclasses, for a land vehicle propelled by a motor and whose sole function is transportation.

221, Article Dispensing, subclass 185 for article dispensers having means providing for the mobility of said dispensers over the surfaces on which they are supported.

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 650+, appropriate subclasses 146+, and 722+ for ambulant type spraying, sprinkling, or scattering devices.

242, Winding, Tensioning, or Guiding, subclasses 370+ for a reeling device which may wind various materials including a hose.

248, Supports, subclasses 98 and 128 for wheeled bag and receptacle supports.

280, Land Vehicles, appropriate subclasses for miscellaneous vehicles adapted to travel on land and unprovided for elsewhere.

298, Land Vehicles: Dumping, subclasses 7, 9, 11, 12+, and 47+ for a vehicle having a body mounted for tilting movement (i.e., dumping vehicle) and a dispensing feature.

414, Material or Article Handling, appropriate subclasses for a vehicle-mounted, or otherwise portable, receptacle or other load holder.

609 With assembly or disassembly feature:
This subclass is indented under subclass 608. Device wherein means are provided to facilitate either (1) the putting together or taking apart of the various elements of the device, or (2) attachment or detachment of the dispensing means upon a vehicle.

610 Dispensing means detachably carried upon vehicle:
This subclass is indented under subclass 609. Device provided with means to facilitate selective attachment or detachment of a dispensing apparatus upon a vehicle, wherein the vehicle, per se, is of the general purpose type or may be used to perform a nondispensing function with the dispensing apparatus detached.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 351+ for automotive mounts for fluid handling systems.

611.1 With guide or guide line marker:
This subclass is indented under subclass 608. Device wherein means are provided either (a) to engage a wall or edge on or adjacent to the surface over which the device moves to guide the same over the surface, or (b) to mark a line or point on the surface to serve as a visual aid for an operative in guiding the device over the surface.

(1) Note. The guide line marker must be in addition to a primary dispensing means, e.g., a lime dispenser, per se, for making grid lines on an athletic field would be excluded under this definition, even though the lines themselves would serve as a guide to the operative.

(2) Note. Devices having a grooved or flanged wheel adapted to travel on a rail or track will be found herein.

611.2 Mortar applying machine:
This subclass is indented under subclass 611.1. Device applying mortar to masonry with means for guiding the device along the masonry in place.

612 With height adjustment:
This subclass is indented under subclass 608. Device in which the material being dispensed is applied via a dispenser outlet to the surface over which the device is translated, and wherein means are provided to adjustably support the outlet at various distances from the surface.

613 Dispensing means driven or controlled by surface contact:
This subclass is indented under subclass 608. Device wherein the dispensing means, which may be a forcer, trap, agitator, discharge controller, etc., is driven or has its operation controlled either by direct contact with the surface or by a wheel which may or may not provide support for the device, and which rotates while contacting the surface over which the device translates.

SEE OR SEARCH CLASS:
239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 155+ indented under mobile tank type supply means for a ground wheel operated spray apparatus.
414, Material or Article Handling, subclasses 437+ for a motion or draft responsive load handler and transporter wherein a load handling means operates in response to the engagement of another means with the ground.

614 This subclass is indented under subclass 613. Ground wheel operated discharge controller: Device including a gate, valve, or other means to vary or cut off the flow of material through the discharge outlet, and wherein the state or position of said means is regulated in response to rotation of a ground wheel.

(1) Note. A reciprocating or rotating apertured feed plate is considered to be a discharge controller if during the operation of the device the aperture(s) intermittently assumes a position in simultaneous registry with a supply and an outlet, and is considered to be a discharge assistant when the aperture acts as a trap, i.e., the aperture alternately registers with the supply and then the

discharge outlet, thereby separating and carrying a portion of material from the supply to the outlet. Devices of the latter type will be found in subclasses 620 and 623+.

SEE OR SEARCH THIS CLASS, SUBCLASS:

620, for a device having a reciprocating feed plate.

623+, for a device having a rotary feed plate.

615 With variable transmission:

This subclass is indented under subclass 613. Device including means to vary the ratio of the speed of rotation of a ground wheel to the rate at which a ground wheel driven dispensing means is reciprocated, rotated, oscillated, etc.

616 With clutch:

This subclass is indented under subclass 613. Device including a disengageable coupling between a ground wheel and a dispensing means driven by the ground wheel.

SEE OR SEARCH CLASS:

192, Clutches and Power-Stop Control, subclasses 30+ for a clutch, per se.

617 Fluid flow discharge:

This subclass is indented under subclass 613. Device having means to direct a stream of fluid into contact with the material to be dispensed so that the fluid picks up the material to be dispensed and carries the same to the place of delivery.

618 Plural ground wheel driven discharge assistants in series:

This subclass is indented under subclass 613. Device including two or more distinct ground driven discharge assistants arranged in succession along the path of the material to be discharged such that the material is operated upon sequentially by each discharge assistant.

619 Ground wheel driven vibrator or jarring means:

This subclass is indented under subclass 613. Device having ground wheel driven means either to shake the container or to cause some part of the container (including an outlet agitator or discharge assistant adjacent the container outlet) to move in reciprocations or oscillations of such small amplitude that the effect is to accelerate gravity flow rather than to move the material bodily toward or through the discharge outlet.

620 Rotary motion of ground wheel to reciprocating, oscillating, or linear motion:

This subclass is indented under subclass 613. Device including a transmission between a ground wheel and a dispensing means which transforms rotary motion of the ground wheel into reciprocating, oscillation, or linear motion to operate or control the dispensing means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

614, for a reciprocating or oscillating feed plate, and see the notes thereto.

621 Fluid pump:

This subclass is indented under subclass 620. Device in which the reciprocating, oscillating, or linear motion derived from the ground wheel is employed to actuate a means to transport or compress a fluent material.

622 Endless conveyor:

This subclass is indented under subclass 613. Device including a ground wheel driven discharge assistant in the form of an endless flexible member.

623 Ground wheel driven rotary discharge assistant or rotary agitator:

This subclass is indented under subclass 613. Device wherein rotary motion of a ground wheel is transmitted to a discharge assistant or an agitator to rotate the same.

SEE OR SEARCH THIS CLASS, SUBCLASS:

614, for a rotary apertured feed plate, and see the notes thereto.

SEE OR SEARCH CLASS:

414, Material or Article Handling, subclasses 437+, as explained in the reference thereto appearing in subclass 613 above, and see particularly subclasses 439+ of that area.

624 With adjustable discharge controller:
This subclass is indented under subclass 623. Device including a gate, valve, or other flow controller at or adjacent to the discharge outlet by means of which the discharge volume may be varied.

(1) Note. A closure element for the discharge outlet which merely serves as a cut off is excluded from this subclass.

625 Sliding gate or shutter:
This subclass is indented under subclass 624. Device wherein the adjustable flow controller comprises a plate-like member which is adapted to be shifted in a direction generally perpendicular to its thickness to vary the quantity of material being discharged.

626 Motor operated dispensing means:
This subclass is indented under subclass 608. Device wherein the dispensing means, which may be a forcer, trap, agitator, discharge controller, etc., is operated by a prime mover.

SEE OR SEARCH THIS CLASS, SUBCLASS:
333+, and see the notes thereto for other dispenser-motor combinations.

627 Power taker off:
This subclass is indented under subclass 626. Device wherein the dispensing means is carried on, pulled by or pushed by a motor vehicle, and wherein the motor propelling the vehicle operates the dispensing means via a power transmission.

SEE OR SEARCH CLASS:
180, Motor Vehicles, subclass 53 for a motor vehicle provided with a device (e.g., a power takeoff) for enabling the motor of the vehicle to supply the power to drive another mechanism.

628 Manually actuated fluid pump:
This subclass is indented under subclass 608. Device including means to facilitate movement over a surface of an apparatus for transporting or compressing a fluent material, wherein the force input to actuate said apparatus is supplied by an operative.

629 Submersible dipper or trap chamber:
This subclass is indented under subclass 591. Apparatus comprising receptacle means submersible below the surface of molten metal in a supply source to acquire a given quantity of molten metal and discharging the given quantity of molten metal after the receptacle is raised to a position above the surface level of the molten metal.

SEE OR SEARCH THIS CLASS, SUBCLASS:
356, for a nonrotary, nonendless belt type dipping trap chamber.

SEE OR SEARCH CLASS:
164, Metal Founding, subclass 366 for a ladle or melt receptacle rotatable with mold or dipper type dispenser.

630 FLUID FLOW DISCHARGE:
This subclass is indented under the class definition. Dispenser having means to direct a flow of fluid into contact with the material to be dispensed so that the fluid picks up material and carries the same to or through the container outlet.

(1) Note. The fluid flow arrangement may be completely exterior of the container, and container contents may be delivered to the flowing fluid in any way, as by gravity, by aspirating action, by an agitator, by force feed, etc. There must be means to direct the flow either of the fluid to the material or of the material into the fluid current. Mere creation of fluid pressure in a supply container is in the appropriate following subclasses.

(2) Note. Where the fluid does not entrain the material to carry it to a place of delivery but agitates or applies pressure to the material to cause discharge, it is not in this or the indented subclasses, but in the appropriate following subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:
3+, for a gas or vapor dispensed by itself, i.e., does not carry another material to the delivery place.

195, for gas agitation of the material to be dispensed.

394+, for fluid pressure discharge without entraining the dispensed material.

464.1+, for dispensers comprising a container and internally extending outlet pipe so arranged that suction is necessary to cause discharge.

617, for ambulant dispensers having fluid flow discharge means.

SEE OR SEARCH CLASS:

19, Textiles: Fiber Preparation, particularly subclass 205 for pneumatic feeding to and cleaning of fiber working machines; subclasses 148 and 304+ for air current deposition of fibers on screen condensers.

34, Drying and Gas or Vapor Contact With Solids, subclasses 576+ for combinations involving fluid current conveying of material.

37, Excavating, subclass 202 for railway snow excavators with fluid current conveyor.

110, Furnaces, subclasses 104+ for blower-type feeders.

118, Coating Apparatus, subclasses 300+ for coating apparatus in which the coating material is projected, sprayed, flung, or dripped on the work.

128, Surgery, subclasses 173+ for atomizers;

137, Fluid Handling, subclasses 268 and 888+ for fluid handling systems having means to entrain or dissolve one fluid in another.

209, Classifying, Separating, and Assorting Solids, appropriate subclasses for such apparatus using fluid currents, particularly subclasses 21+ and 132+.

210, Liquid Purification or Separation, subclasses 198.1+ for means to add material to a separator.

221, Article Dispensing, subclass 278 for article dispensers in which the discharge assistant is a nonsolid force applying medium.

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 77+ for an orchard-type mobile distributor in which fluent material is discharged into a gaseous conveying current; subclasses 654+ for a device comprising a container for nonfluid material and a scattering or strewing means, there being a source or a generator of gaseous fluid to mix with and aid in scattering of the material; and subclasses 310+ (except 313), 337+, 379; and 398+ for apparatus for mixing or dissolving one fluid in another with subsequent distribution.

261, Gas and Liquid Contact Apparatus, appropriate subclasses for subject matter relating to contacting one fluid with another to exchange properties of the fluids or mutually modifying conditions.

291, Track Sanders, subclasses 3+ for those involving fluid delivery.

406, Conveyors: Fluid Current, appropriate subclasses for conveying of solids by entraining them in a fluid current. See the search note to this class (222) in the main definition of Class 406 for the class lines.

417, Pumps, subclasses 151+ for jet pumps.

422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclass 305 for apparatus for preparing disinfecting material by use of gaseous currents.

433, Dentistry, subclass 88 for intra-oral dental dispensers wherein the dispensed material is discharged by a fluid current; and subclasses 91+ for fluid current saliva ejectors.

451, Abrading, subclasses 75+ for a sand-blast machine.

604, Surgery, subclass 58 for powder dispensers; subclasses 313+ for material removed from the body by suction; and subclasses 319+ for aspiration collection container or trap.

631 Fluid flow generated by manually actuated working member:

This subclass is indented under subclass 630. Dispenser including a chamber whose volume is varied by manually moving or deflecting all or a portion of the chamber wall whereby the resulting increase or decrease in pressure within the chamber is utilized to move the fluid into contact with the material to be dispensed.

SEE OR SEARCH CLASS:

239, Fluid Sprinkling, Spraying, and Diffusing, subclass 328 for a supply holder having a collapsible wall; and subclasses 329+ for a supply holder having a moving surface for the material to be sprayed.

406, Conveyors: Fluid Current, subclass 38 for portable fluid current conveying devices.

632 Flexible working member:

This subclass is indented under subclass 631. Dispenser wherein at least a portion of the chamber wall comprises a pliant material which is deflected to change the volume of the chamber.

SEE OR SEARCH THIS CLASS, SUBCLASS:

92+, for a supply holder having a collapsible wall which does not return to its original position.

206+, for dispensers having a resilient wall which is deflected to expel the material.

SEE OR SEARCH CLASS:

239, Fluid Sprinkling, Spraying, and Diffusing, subclass 327 for a supply container having a resilient wall; and subclasses 362 and 363 for flexible wall gas pumps which generate fluid pressure to dispense material.

633 Bellows or bulb:

This subclass is indented under subclass 632. Dispenser wherein either (a) substantially the entire chamber wall is formed of an elastically deformable material, or (b) the chamber wall comprises a pair of opposed rigid members connected together by pliant material.

634 Telescoping supply container:

This subclass is indented under subclass 631. Dispenser wherein the chamber wall comprises a plurality of circumferentially continuous interconnected nested segments which are moved, one into another, to decrease the volume of the chamber, and wherein the material to be dispensed is carried inside the chamber.

SEE OR SEARCH THIS CLASS, SUBCLASS:

398, for a telescopic container for generating fluid pressure to discharge the material, with no entraining of the material in the fluid.

SEE OR SEARCH CLASS:

239, Fluid Sprinkling, Spraying, and Diffusing, subclass 357 for a telescoping liquid supply container for generating fluid pressure to discharge the container.

635 Pressurized aerosol container:

This subclass is indented under subclass 630. Dispenser comprising a chamber which contains both the material to be dispensed and a charge of compressed fluid to discharge the material to or through the container outlet.

SEE OR SEARCH THIS CLASS, SUBCLASS:

394+, for fluid pressure discharge of material with no entraining of the material.

SEE OR SEARCH CLASS:

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 340+ for aerosols; and subclass 573 for aerosol nozzles.

516, Colloid Systems and Wetting Agents; Subcombinations Thereof; Processes of Making, Stabilizing, Breaking, or Inhibiting, subclasses 1+ for continuous gas or vapor phase colloid system (e.g., smoke, fog, aerosol, cloud, mist) or agents for such systems or making or stabilizing such systems or agents, when generically claimed or when there is no hierarchically superior provision in the USPC for the specifically claimed art.

636 From movable trap chamber:

This subclass is indented under subclass 630. Dispenser comprising one or more material receiving cavities which are alternately moved into communication with a supply of material and a discharge location.

SEE OR SEARCH THIS CLASS, SUBCLASS:

251+, for other dispensers having movable trap chambers.

SEE OR SEARCH CLASS:

406, Conveyors: Fluid Current, subclasses 63+ and 74 for a fluid current conveyor combined with a movable trap chamber.

637 Open blast:

This subclass is indented under subclass 630. Dispenser including means to deliver the material to be dispensed into the fluid current path to discharge the material from the delivery means directly into the dispenser environment.

SEE OR SEARCH CLASS:

239, Fluid Sprinkling, Spraying, and Diffusing, subclasses 77+ for orchard-type distributors wherein a fluent material is discharged by a gaseous current.

638 INCLUDING TIMER:

This subclass is indented under the class definition. Dispenser having means to limit either the period of discharge, or the period between the occurrence of a predetermined event and the beginning of a subsequent discharge period.

SEE OR SEARCH CLASS:

62, Refrigeration, subclasses 231+ for timer actuation of a refrigeration device.

137, Fluid Handling, subclasses 132+ for periodic discharging siphons, and subclasses 623.11+ for a fluid distribution system including a programmer, or timer (no supply container being claimed).

200, Electricity: Circuit Makers and Breakers, subclasses 19.01+ and 33+ for periodic and retarded switches, respectively.

210, Liquid Purification or Separation, subclasses 138+ for timer controlled liquid treatment, and subclasses 141+ for programmer controlled liquid treatment.

221, Article Dispensing, subclasses 15+ for article dispensing devices having a timing, or delay mechanism.

239, Fluid Sprinkling, Spraying, and Diffusing, subclass 66 for serially operated means distributing fluid to a diffuser, and subclasses 67+ for selectively preset means serving to cut off flow to a diffuser.

251, Valves and Valve Actuation, subclasses 15+ for valves having a compulsory cutoff after a nonautomatic opening; subclasses 25+ for fluid servomotor operation of valves; subclasses 48+ for dashpot, or fluid controlled retarders, or timers for valve actuators; and subclass 64 for nonfluid retarders in valve actuation.

368, Horology: Time Measuring Systems or Devices, appropriate subclasses, for a timer, per se.

431, Combustion, subclasses 18+ for a burner assembly having a timer, programmer, or condition responsive control.

639 For timing dispensing period:

This subclass is indented under subclass 638. Dispenser including means to limit the period of discharge.

640 Of beverage or beverage component dispenser:

This subclass is indented under subclass 639. Dispenser wherein the material being discharged comprises a liquid for drinking, or an adjunctive substance therefor.

(1) Note. The “adjunctive substance” above may be, for example, foam head for beer.

641 Including electrical timing circuit:

This subclass is indented under subclass 640. Dispenser including an electrical circuit, the inherent electrical properties of which determine the period of discharge.

642 Of discharge assistant:

This subclass is indented under subclass 639. Dispenser including means to limit the period of operation of a device which acts to move, or tends to cause movement of, material toward, or through a container outlet.

643 Rotary:
This subclass is indented under subclass 642. Dispenser wherein the device which moves material toward, or through the container outlet turns about an axis.

644 And means for timing the period between dispensing cycles:
This subclass is indented under subclass 639. Dispenser which also includes means to limit the period between the end of one discharge and the beginning of the succeeding discharge.

SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 624.13+ for fluid distribution systems including a timer, or a programmer capable of causing a cycle of operation of one, or more valves to be repeated.

645 Of aerosol dispenser:
This subclass is indented under subclass 644. Dispenser comprising a gas-pressurized container for dispensing a solid, or liquid contained therein by entraining fine particles of the solid, or liquid in gas allowed to escape from the container through a valve controlled by the period limiting means.

646 Including electrical timing circuit:
This subclass is indented under subclass 645. Dispenser including an electrical circuit, the inherent electrical properties of which determine the period of discharge, or the period between the end of one discharge and the beginning of the succeeding discharge.

647 And mechanical timer element:
This subclass is indented under subclass 646. Dispenser including a mechanism for limiting the period of discharge, or the period between the end of one discharge and the beginning of the succeeding discharge.

648 And battery power supply:
This subclass is indented under subclass 647. Dispenser including a chemical cell, or cooperating structure therefor, which energizes the electrical circuit.

649 For aerosol dispenser:
This subclass is indented under subclass 638. Dispenser comprising a gas-pressurized container for dispensing a solid, or liquid contained therein by entraining fine particles of the solid, or liquid in gas allowed to escape from the container through a valve controlled by the period limiting means.

650 For plant or animal feed dispenser:
This subclass is indented under subclass 638. Dispenser comprising a container for food, or liquid for consumption by a plant, or lower animal, wherein the discharge of the food, or liquid is controlled by the period limiting means.

SEE OR SEARCH CLASS:
119, Animal Husbandry, subclasses 51.11+ for a timer controlled feeding device having structure peculiar to animal feeding and including more than a mere dispenser.

651 Of wash cycle ingredient dispenser:
This subclass is indented under subclass 638. Dispenser including a container for a cleansing agent and means for discharging the cleansing agent into an article washing machine, wherein the discharge of the cleansing agent is controlled by the period limiting means.

(1) Note. Excluded from this subclass are patents having claims to apparatus which time the actuation period of agitators, or those which merely item the closure of outlet elements, or flow controllers.

SEE OR SEARCH CLASS:
68, Textiles: Fluid Treating Apparatus, subclass 17 for clothes washing machine claimed with soap dispensing means. Patents nominally reciting a clothes washing machine combined with soap dispensing structure are properly classified in Class 222.
134, Cleaning and Liquid Contact With Solids, subclasses 56+ for dishwashing machines having automatic controls.

652 Movably mounted ingredient container:
This subclass is indented under subclass 651. Dispenser wherein the discharge of the cleansing agent is effected by movement of the entire container with respect to the machine.

END